

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1213.—VOL. XXVIII.

London, Saturday, November 20, 1858.

STAMPED... SIXPENCE.
UNSTAMPED... FIVEPENCE.

JAMES CROFTS, MINING AND SHAREBROKER,
No. 1, FINCH LANE, LONDON (established 14 years), TRANSACTS every
BUSINESS MINING SHARES, but, not being a DEALER, BUYS and SELLS
orders confided to him.

MINING MARKET is in a highly encouraging state for investors, and many mines
making large profits on late purchases, for a continuance of which there is still a
sizable margin.

Croft's refers the readers of the Journal to his article on the changes and aspects
of the mining market, on page 766, in which will be found general and particular discussions
on the value of mining property, on, or irrespective of, the market; his opinions
backed by experience, but not offered as infallible. He will be happy to advise
on safe investments at all times.

JAMES LANE, No. 29, THREADNEEDLE STREET,
MINING SHARE DEALER.

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LONDON, is a BUYER or SELLER in DIVIDEND and PROGRESSIVE
S. for CASH. Bankers: London and Westminster.

SPECIAL SALE and private disposal, free of commission, the FOLLOWING
TABLE SHARES in rising mines, at ADVANTAGEOUS PRICES to the buyer,
immediate delivery:—75 Kelly Bray, 109 Crebior, 10 Ding Dong, 30 Hington
(Levant).

DIVIDEND MINES, well selected, are the BEST of all PUBLIC
INVESTMENTS, paying, as they do (in dividends every two or three months),
to 30 per cent. per annum. NO DIVIDEND MINES, carefully chosen,
are advanced in price 500 per cent., or more.

PETER WATSON, having 14 years' experience in every department of mining and
management, together with an extensive and regular correspondence with mining
and others in Cornwall, Devon, and elsewhere, is enabled to judge of and select
of intrinsic value.

SPECIAL REPORT (WEEKLY) WILL APPEAR IN
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REPORTS will also be given, and important information on the present and future
operations and prospects of mines throughout Cornwall and Devon, with advice thereon as
to sale or purchase.

Those who desire to have copies regularly sent them will be supplied for an annual
subscription of £1 1s., or 6d. per copy.

PETER WATSON,
Miner and Foreign Stock, Share, and Mining Offices,
3, Old Broad-street, London, E.C.

THEAL CHARLOTTE.—A SPECIAL REPORT published in
PETER WATSON'S WEEKLY MINING CIRCULAR AND SHARE LIST
every day.

—GREAT WHEAL FORTUNE.—A SPECIAL REPORT will be published next
in this mine.

R. H. B. RYE SPECIALLY RECOMMENDS to his clients and
the public the FOLLOWING MINES for IMMEDIATE INVESTMENT, as
one of the soundest character, and undoubtedly first-rate prospects:—

Wheal Kitty. East Trewoon.

Wheal Beeth. Ding Dong.

Wheal Greville. North Roskear.

INE SHARE LIST.—MR. LELEAN begs to inform his friends
and the public that, in consequence of the numerous applications to publish a
list of prices in the Mining Journal, and to avoid at the same time giving offence
to his clients, he will issue weekly in this column his LIST OF PRICES of these SHARES
are DEALT IN on the market, at close prices up to Friday evening, by giving
BUYING and SELLING PRICES:—

	Buying.	Selling.
100 Consols	63 1/2	71 1/2
50 Consols	5 1/2	5 1/2
60 Consols	6	7
100 and Basset United	11 1/2	13 1/2
100 and Jane	65	65
50 Brea	55	60
50 Hewas	55	60
50 Ding	8	9
50 Great Walls	68	80
50 Daren	3	5
50 Trewoon	21 1/2	31 1/2
50 Wheal Russell	75 1/2	77 1/2
50 Basset	95	105
50 Basset and St. As. A. 132	135	144
50 South Tolgoe	135	144
50 Wheal Vor	105	185
50 Caradon	14	14
50 Hewas	2	2 1/2
50 Kelly Bray	2	2 1/2
50 Lady Bertha	95	112
50 Ding Dong	107 1/2	112
50 Trewoon	21 1/2	31 1/2
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MOST IMPORTANT TO COLLIERY OWNERS AND COLLIERY MANAGERS.

HENRY J. MORTON AND CO.,
GALVANISED IRONWORKS, 2, BASINGHALL BUILDINGS, LEEDS.

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IMPROVED SIGNAL BELLS,

especially prepared to meet the requirements of the new Act for the Inspection of Coal Mines. It has met with the decided approval of many large colliery owners and managers. **SIMPLE, EFFICIENT, and CHEAP.** Price 15s., 17s. 6d., and 20s. each.

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STEAM PRESSURE GUAGES, very strong and accurate, £2 and £2 12s. 6d. each.

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FAIRBANK'S IMPROVED PATENT WEIGHING MACHINES,
for the use of IRONWORKS, COLLIERIES, RAILWAYS, WAREHOUSES, STORES, &c.

The most ACCURATE MACHINES in use, and the cheapest.

MACHINES of all sizes, from 1 cwt. to 30 tons, for RAILWAY WAGONS, CARTS, or WAGONS.

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Patent Asphaltated Roofing Felts, Boiler Felts, Galvanised Iron, Mining Stores, &c., in Stock.

MAPPIN'S ELECTRO-SILVER PLATE & TABLE CUTLERY.

—MAPPIN BROTHERS (Manufacturers by Special Appointment to the Queen) are the only Sheffield makers who supply the consumer in London. Their London Show Rooms, 67 and 68, KING WILLIAM STREET, LONDON BRIDGE, contain by far the **LARGEST STOCK OF ELECTRO-SILVER PLATE AND TABLE CUTLERY** in the world, which is transmitted direct from their manufactory, QUEEN'S CUTLERY WORKS, SHEFFIELD.

Fiddle Pat. Double Thread. King's Pat. — Lily Pat.

12 Table Forks, best quality	£ 1 16 0 ..	£ 2 14 0 ..	£ 3 0 0 ..	£ 3 12 0 ..
12 Table Spoons, best quality	1 16 0 ..	2 14 0 ..	3 0 0 ..	3 12 0 ..
12 Dessert Forks, best quality	7 0 ..	2 0 0 ..	2 4 0 ..	2 14 0 ..
12 Dessert Spoons, best quality	1 7 0 ..	2 0 0 ..	2 4 0 ..	2 14 0 ..
12 Tea Spoons, best quality	16 0 ..	1 4 0 ..	1 7 0 ..	1 16 0 ..
2 Sauces, Ladies, best quality	8 0 ..	0 10 0 ..	0 11 0 ..	0 13 0 ..
1 Gravy Spoon, best quality	7 0 ..	0 10 0 ..	0 11 0 ..	0 13 0 ..
4 Salt Spoons (gilt bowls), best qu.	0 6 8 ..	0 10 0 ..	0 12 0 ..	0 14 0 ..
1 Mustard Spoon, best quality	1 0 8 ..	0 2 6 ..	0 3 0 ..	0 3 6 ..
1 Pair Sugar Tong, best quality	0 3 6 ..	0 5 6 ..	0 6 0 ..	0 7 0 ..
1 Pair Fish Carvers, best quality	1 0 0 ..	1 10 0 ..	1 14 0 ..	1 18 0 ..
1 Butter Knife, best quality	0 3 0 ..	0 5 0 ..	0 6 0 ..	0 7 0 ..
1 Soup Ladle, best quality	0 12 0 ..	0 16 0 ..	0 17 6 ..	1 0 0 ..
1 Egg Spoons (gilt), best quality	0 10 0 ..	0 15 0 ..	0 18 0 ..	1 1 0 ..

Complete Service £10 13 10 .. £15 16 6 .. £17 13 6 .. £21 4 6

Any article can be had separately at the same prices.

One Set of Four Corner Dishes (forming eight dishes), £8 8s.; One Set of Four Dish Covers (one 20 in., one 18 in., and two 14 in.), £10 10s.; Crucifix (four glass), 24s.; Full Size Tea and Coffee Service, £20 10s. A Costly Book of Engravings, with prices attached, sent per post on receipt of 12 stamps.

Ord. qual. Medium qual. Best qual.

Two dozen Full Size Table Knives, Ivory Handles .. £2 4 0 .. £2 6 0 .. £2 12 0 ..

1½ dozen Full Size Cheese ditto .. 1 4 0 .. 1 14 0 .. 2 11 0 ..

One Pair Regular Meat Carvers .. 0 7 6 .. 0 11 0 .. 0 15 0 ..

One Pair Extra Sized ditto .. 0 8 6 .. 0 12 0 .. 0 16 0 ..

One Pair Poultry Carvers .. 0 7 6 .. 0 11 0 .. 0 15 0 ..

One Steel for Sharpening .. 0 3 0 .. 0 4 0 .. 0 6 0 ..

Complete Service £1 16 0 .. £6 18 6 .. £9 16 6

Messrs. MAPPIN's table knives still maintain their unrivalled superiority; all their blades, being their own Sheffield manufacture, are of the very first quality, with secure ivory handles, which do not come loose in hot water, and the difference in price is occasioned solely by the superior quality and thickness of the ivory handles.

MAPPIN BROTHERS, 67 and 68, King William-street, City, London; Manufactury, Queen's Cutlery Works, Sheffield.

NEW PATENT ACT, 1852.—Mr. CAMPIN, having advocated

Patent Law Reform before the Government and Legislature, and in the pages of the *Mining Journal*, &c., is now READY to ADVISE and ASSIST INVENTORS in OBTAINING PATENTS, &c., under the NEW ACT.

The Circular of Information, gratis, on application to the Patent Office and Designs' Registry, 156, Strand.

THE PRACTICAL MECHANIC'S JOURNAL (Part 128, for

November, 1856, Price 1s.) contains an extra-sized beautifully finished Copper-plate Engraving of the Horizontal Marine Engine of the screw steamer *Metropolis*, by the Victoria Foundry Company, Greenwich; and 50 Wood Engravings. Also, Original Articles on the Engines of the *Metropolis*, Scientific Societies, Royal Institution, British Association in Leeds; South Africa, &c.; Mechanical Notes from America, History of the Sewing Machine, Cutting Machine of Longitudinal and Transverse Action. Recent Patents: McLennan, Boots and Shoes: Templeman, Artificial Fuel: Peter, Wool Combining: Fife, Stop-cocks: McCrea, Casting Ships; Halkerton, Mangles. Reviews of New Books, Correspondence, Proceedings of Scientific Societies, Marine Memoranda, Monthly Notes of Scientific Novelties, Lists of Patents and Designs Registered, Law Reports of Patent Cases, &c.—Longman and Co., Paternoster-row; Editor's Offices (Offices for Patents), 47, Lincoln's Inn-fields, W.C.

INVESTMENTS IN BRITISH MINES.

Full particulars of the most important Dividend and Progressive Mines will be found in the Fourth Edition of

BRITISH MINES CONSIDERED AS AN INVESTMENT.

Recently published, by J. H. MURCHISON, F.G.S., F.S.S.

15s. 3d.; price 3s. 6d., by post, 4s.

Mr. Murchison also publishes a QUARTERLY REVIEW OF BRITISH MINING, giving, at the same time, the Position and Prospects of the Mines at the end of each quarter, the Dividends Paid, &c., price 1s. Reliable information and advice will at any time be given by Mr. Murchison, either personally or by letter, at his offices, No. 117, Bishopsgate-street, Within, London, where copies of the above publications can be obtained.

OPINIONS OF THE PRESS.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments.—*Mining Journal*.

The book will be found extremely valuable.—*Observer*.

A valuable little book.— *Globe*.

A valuable guide to Investors.—*Herapath*.

Mr. Murchison takes sound views upon the important subject of his book, and has placed for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines.—*Morning Herald*.

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—*Morning Chronicle*.

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison.—*Leeds Times*.

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats.—*Derby Telegraph*.

To those who wish to invest capital in British Mines, this work is of the first importance.—*Welshman*.

This work enables the capitalist to invest on sound principles; it is, in truth, an excellent guide.—*Plymouth Journal*.

Persons desirous to invest their capital in mining speculations, will find this work a very useful guide.—*Warrick Advertiser*.

It is full of carefully compiled and reliable information relative to all the known mines in the United Kingdom.—*Sheffield Free Press*.

Those interested in mining affairs, or who are desirous of becoming speculators, should obtain and carefully peruse the work.—*Monmouth Beacon*.

Every person connected, or who thinks of connecting himself, with mining speculations should possess himself of this book.—*North Wales Chronicle*.

A very valuable book.—*Cornwall Gazette*.

All who have invested, or intend to invest, in mines should peruse this work.

We believe a more useful publication, or one more to be relied on, cannot be found.

—*Plymouth Herald*.

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital.—*Poole Herald*.

Mr. Murchison will be a safe and trustworthy guide, so far as British Mines are concerned.—*Bath Express*.

Is deserving the attention of every one who seeks profitable investment of his capital.—*Brighton Examiner*.

This is really a practical work for the capitalist.—*Stockport Advertiser*.

To capitalists the work will prove very serviceable.—*Birmingham Mercury*.

All who have invested, or intend to invest, in mines, would do well to consult this very useful work.— *Ipswich Express*.

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UNSOPHISTICATED GENEVA, of the true juniper flavour, and precisely as it runs from the still, without the addition of sugar or any ingredient whatever. Imperial gallons, 1s.; or in dozen cases, 2s. each, packages included.

HENRY BRETT AND CO., Old Furnival's Distillery, Holborn.

PURE BRANDY, 16s. PER GALLON.—Pale or brown Eau-de-vie, of exquisite flavour and great purity (identical, indeed, with every respect with those productions of the Cognac district which are now difficult to procure at any price), 3s. per dozen, French bottles and cases included, or 16s. per gallon.

HENRY BRETT AND CO., Old Furnival's Distillery, Holborn.

WINES FROM SOUTHERN AFRICA.—INTRODUCER OF THE SOUTH AFRICAN PORT, SHERRY, &c., 20s. per dozen, bottles included. A pint sample of each for 3s. stamps. Wine in case forwarded free to any railway station in England.

(Extract from the *Lancet*, July 10, 1856.)

THE WINES OF SOUTH AFRICA.—We have visited Mr. Denman's stores, selected in all eleven samples of wine, and have subjected them to careful analysis. Our examination has extended to an estimation of their bouquet and flavour, the acidity and sweetness, the amount of wine stone, the strength in alcohol, and particularly to their purity. We are, on the average, nearly as strong; that they are pure, wholesome, and perfectly free from fermentation. Indeed, considering the low price at which they are sold, their quality is remarkable.

EXCELSIOR BRANDY, Pale or Brown, 15s. per gallon, or 30s. per dozen.

Terms cash. Country order must contain a remittance. Crossed cheques, Bank of London. Price lists, with Dr. Hassall's analysis, forwarded on application.

JAMES L. DENMAN, 55, Fenchurch-street, corner of Railway-place, London.

MINING IN IRELAND—ROUGH NOTES.—No. IV.

Leaving the Schull Bay Mines, we ascended the hill to the east, from which there is a very fine view of Schull Harbour, Long-Island Sound, and Roaring Water Bay, which is studded with islands, and may be well designated the "Bay of Islands." In the distance is the ancient town, but now a small village, of Baltimore, which in former times returned two members to the Irish Parliament, and from which the City of Baltimore, in America, derived its name. We find the strongholds of the O'Driscoll's and McCartie's still in a good state of preservation along the sea-coast; and Kilcoo, Rosshar, and White Castles are objects of great interest. Our pathway to the east was near the sea, and though not one of the most even, it being diversified with numerous bogs and rocks, yet, upon the whole, it was pleasant and interesting. About two miles from Schull Bay we came unexpectedly upon a very pretty spot—Dreenatra, which, with its splendid new mansion, gardens, grounds, plantations, &c., presents a pleasing contrast to the surrounding wild and rocky district. We observed strong traces of copper ore in this property, and a place was pointed out to us where 60 tons of that mineral were quarried open from the surface. This estate was recently purchased by an English gentleman, Dr. Hicks, under the Incumbered Estates Court. Passing on from Dreenatra we soon reached Rosshar, Ballycunnick, Cappagh, &c. These towns form part of the manor of Rosshar and were formerly the property of Lord Audley. Horse Island, which is about half a mile south of the main land, is also part of the same property. It was at Cappagh and Horse Island, it appears, that the copper mines were worked some thirty years ago by the celebrated West Cork Mining Company. Large sums of money were expended by this company on a slate quarry near Audley Cove; but from all accounts we learn that neither the mines nor the slate quarries added much to the wealth of the shareholders; and if our information be correct, which, however, we have no reason to question or doubt, it would have been matter for surprise rather than otherwise if those speculations had turned to profitable account, for, like many companies of modern date, the prevailing principle seemed to be to make places for officers, and in fact, to make use of a common expression, there were more officers than soldiers. On travelling through this district we observed some iron ore, known in the locality as "big iron." It appears that the West Cork Mining Company shipped some cargoes of this iron ore to London as manganese, but when it arrived it was found to be unsaleable.

Lond Audley's estate, mines, and minerals, were a short time since sold by the Incumbered Estates Court, and purchased by an English gentleman, Mr. T. S. Cave, who we were informed, was some years ago largely interested in mines in Cornwall; and since Mr. Cave became the proprietor some of the mines have been resuscitated—Horse Island and Ballycunnick. We find, however, that the operations at Horse Island were continued but for a short period, and as there are various reasons assigned for the works being discontinued, and which, no doubt, will in due time be explained, we pass on to notice, that in our way, Ballycunnick Mine. This mine is near the little harbour of Rosshar, and is well situated for shipping ores, landing coals, and other supplies; a Cornish pumping-engine has been erected, and offices, and other necessary surface erections. Some cargoes of ore of good quality have been shipped to Swansea; and another cargo, it appears, is ready for market. This mine, we were informed, is worked by a single gentleman, resident in London, and we wish him every success—it is, however, a weighty undertaking for an individual. It appears, too, as if some of the principles of the late West Cork Company, as regards management, still cling to this property; and the complaint of more officers than soldiers would be just as applicable now as formerly. As our informant stated that the salaries of the staff amount to upwards of 600/- per month, while the salaries of 30 miners, about the number employed, would not exceed 90/- per month; we imagine, therefore, that it should be a rich concern to support so costly an administration of affairs. The question of manganese, otherwise big iron, has been again revived, and we saw considerable quantities of that mineral collected in heaps by the road side for shipment. A gentleman, Prof. Bray, Government Inspector of Mines (?), from London, we are informed, was recently in this locality, and that it was upon his advice and recommendation the large quantity of the carbonate of copper in it, in many instances the slate rocks appear to be thoroughly impregnated with it, but the gneiss, or veinstone, being heavier than the carbonates, it has hitherto been found impracticable to cause a separation without losing the greatest part of the copper. The science, however, of chemistry will overcome this difficulty, and commence a new era in the method of separating ores and metallic substances, and start from the point where practical knowledge made it possible.

Those who are well acquainted with the Ballycunnick Mine say it ought to be a good concern; and, from what we have seen, we agree in the opinion. A new road has been made from Cappagh to the village of Ballycunnick, a distance of four miles; this village is in a hollow; it is a dirty place, and has a delapidated appearance; it is ten miles from Skibbereen, and two small inns pass through it daily from Skibbereen to Crookhaven. During the late mania for mining companies, a mine was opened near the village of Ballycunnick by the South Cork Mining Company. Some shipments of ore were made, but whether owing to want of capital or any other cause we could not learn, the concern was, after an inefficient trial, abandoned; the formation about the mine seems to be strongly mineralised.

Proceeding from Ballycunnick to within a mile of Schull, we turned off to the north towards the gap of Mount Gabriel. The view from the gap is most extensive and magnificent. Towards the north you have the mountains around Bantry, and far away in the distance the Kerry Mountains; while to

Original Correspondence.

PRACTICAL MINING—SYPHONS.—No. I.

SIR.—Syphons are, no doubt, very useful when applied to proper purposes. They are, however, sometimes adopted and tried in mines under circumstances which render their efficiency physically impossible. It may not, therefore, be out of place, nor will it, perhaps, be thought by some of your readers foreign to the object of your useful Journal, to point out under what conditions they may be judiciously and effectively applied. By far the greater majority need not be told that when a vacuum is formed in syphons the water, or other liquid, is forced into them by the pressure of the atmosphere, and that it is the amount of atmospheric pressure available which is the necessary condition on which their efficiency depends. It is well known that the pressure of the atmosphere at a medium temperature, and at the level of the sea, is capable of raising and supporting a column of mercury in a vacuum to a height of 30 in. The specific gravity of mercury being 13.578 times that of distilled water, taken at its maximum density, it follows that a column of water may be raised by the same pressure 13.578 times that of mercury, or about 34 feet; whence it is laid down as a principle that syphons cease to act below this depth. In applying syphons, however, for draining mines, care should be taken not only to ascertain the specific gravity of the water to be raised, but also to make some allowance for the minerals held in mechanical suspension. None need be told that mineral water is heavier than distilled water; and when it is highly charged with sulphuric and other acids, as it often is in mines, its specific gravity is thereby very much increased, which sometimes neutralises the effective force of atmospheric pressure at a depth of 30 feet, and in practice 28 feet, under certain conditions, has been proved to be the lowest depth to work well—the weight of the water and atmospheric pressure being at this depth nearly in equilibrium.

Notwithstanding the knowledge of this may have been formerly impressed on the attention of your readers, and that now by some of them it may be thought a waste of time and the space taken up in your Journal to repeat anything of the kind, it nevertheless, should be considered that a new class of men is constantly being brought forward as managers, secretaries, and agents of mines, some of whom have not, perhaps, had the advantages of education, nor experience so to guide them as to make them competent in every department of mining, and who would, perhaps, kindly receive as hints what is here kindly offered to their note.

Nov. 17.

YOUNG CORNWALL.

A SHAREHOLDER.

SORTRIDGE CONSOLS.

SIR.—Although this mine is at present looking poor, there are several good points to be explored; and, by putting out a few judicious cross-cuts, discoveries may be made sufficient to bring it again into a profitable state. It is indeed a matter of note that so little has been done here in cross-cutting, especially as in North Wheal Robert, close adjoining and on the same lode, where the system has recently been pursued to a considerable extent, the value of the mine has been doubled in consequence, and as the new south lode, lately cut there in the 42 fm. level, is proving profitable, the western end driving towards the Sortridge boundary (distant 60 fms.), being valued in Capt. Charles Thomas's report at £7, to 107 per fathom, there can be little doubt of the existence of a valuable run of ground in Sortridge, from the boundary to the cross-course, this being parallel to the great course of ore on the main lode. This south lode has been seen here only in the 50 fm. level, where it is daily expected to be cut east of the cross-course; but, in my opinion, cross-cuts should at once be commenced, by a full force, from the 62 and 74 fm. levels, east of the cross-course, as well as from the 50 fm. level, east of the western cross-course, where the larger portion of the lode is known to be standing to the south, and as the main and south lodes converge in depth, the distance to drive would be considerably less than in the upper levels. There are also two or three intervening lodes and branches, one of which was found productive when met with in the cross-cut from the 50; but as these would be considered not worth driving on if cut poor at the point of intersection, care should be taken to select the most favourable point to drive the cross-cut—such as opposite the courses of one on the main lode. Were these suggestions to be adopted there can be little doubt the shareholders would, in a few months, be amply compensated for the small additional outlay required, even though it should be necessary at the next meeting to make a call to carry them into effect.

A SHAREHOLDER.

ADVERTISING BROKERS.

SIR.—I observe that one of this fraternity, who finds the cap fits, has sent you a letter, written apparently with "virtuous indignation" at what he calls my "imputations" and "suspicion," as far as regards him. Now, I need scarcely say that nothing is further from my intentions or wishes than to misrepresent any one. But if there is no foundation for the rumour that fees were paid for "writing up" certain mines, I can only say that your correspondent is to thank one of his own friends for openly and repeatedly declaring that he had paid a fee.

Your correspondent says, "I am not a shareholder in any mine, not even to the extent of a single share. About two years since, at the pressing solicitations of some large shareholders, I became a lessee in a mine, and am so still." It is very unusual for persons to become lessees of property in which they have no interest, though I have sometimes heard of payments being made for the use of names, to undertake responsibilities that more timid people decline. But if your correspondent is not a shareholder, may I ask if he was not one? for I find in your Journal of Oct. 9 last that he was "elected on the committee of management." Surely only shareholders can occupy such a position, I think, therefore, I was quite justified in asking—"Is it true that one of these advertisers is a lessee and considerable shareholder in a mine which he has been almost weekly, for a long time past, using the most strenuous efforts to 'pull'?" though he has led the public to believe that he was not personally interested in any mines, and, therefore, that his advice was unbiased?" Your correspondent admits he is lessee, and the announcement that he is elected on the committee would also seem to tend to the conclusion that he is a considerable shareholder.

I will now conclude, in words similar to those of your correspondent.—"The coast is now clear to him, either to convict himself or his friends of not being very particular as to the correctness or otherwise of their remarks; and he has to choose between the two alternatives this letter affords him.—*T. W. Nov. 16.*

CORNISHMENS.

GOVERNMENT SCHOOL OF MINES.

The subsequent lectures were on "Coal and Charcoal as Fuel," an epitome of which appeared in the *Mining Journal* during the last session. The next was "On Zinc." This was brittle, but may be rendered malleable by heating it up to a certain point, and by slowly cooling the large cleavage points are plainly shown. The character of the fractured surface, in a great measure, depends upon the foreign matter, especially iron. The specific gravity after fusion is 6.861; rolled or sheet-zinc, 7.1098; and after rolling or hammering, according to circumstances, it may be 7.2 or 7.3. It melts at 400°. When heated up to 150° it may be rolled into sheets, or drawn out in a wire, but at 200° it is so brittle that it may be pounded in a mortar. Zinc, after rolling to a certain extent, retains its malleability when cold. If heated at a peculiar temperature you may bend it backwards and forwards without breaking, and it will not give that crackling sound which is found in tin when subjected to the same treatment; but if heated up to a certain temperature it may be broken, whether allowed to cool rapidly or slowly, and when it has the same sound as tin: its linear dilatation is 1.340. When heated from 0° to 100° zinc will sink down, whereas on occasions copper will rise in bosses or blisters. Zinc is poured into cast-iron boxes, so as to cool rapidly, and it requires a nice practiced eye to judge of the temperature, which can only be learnt in practical establishments. When zinc is exposed to the action of air at a little above its melting point, it is covered with a grey pellicle and these are continuous, and can be taken off. When above the melting point it burns with a luminous flame, and the oxide of zinc is formed. A specimen of this was shown when further burnt, being of a bluish texture, and of a conoidal form. It underforms, the structure of which is so dense that it protects the subjacent zinc, and this is one of the reasons why it is so useful for roofing purposes, being entirely the reverse of iron, the oxide or rust of which materially deteriorates every year the metal. The composition of the rust of zinc gave five equivalents of oxide of zinc, four of carbonic acid, and eight of water. These observations were made on a roof at Munich, which had stood in that atmosphere for 27 years, and the calculations made by Karsten were that this roof would stand for 247 years. Zinc shows no change in water with pure air, but when heated it decomposes water, and is then crystallised. The action depends upon its impurity: the greater the impurity the more the action. Strong sulphuric acid acts upon it as it does upon copper; nitric acid likewise attacks it energetically. Zinc decomposes water with soda or potash, and a great deflagration takes place either with nitrate of potash or chloride of sodium; at a red heat it reduces carbonic acid. Oxide of zinc is prepared in various ways; it does not blacken when exposed to the air, like lead, but is not so dense a body as that is. It is, however, used extensively as a pigment in the pottery. The zinc of commerce is said to contain a certain amount of carbon; there was nothing, however, definite known on this point, and he should further allude to this subject when he came to the alloys of zinc. They would next look at sulphur and zinc. Sulphide of zinc requires a very high temperature for fusion, the oxide as well as the sulphide being practically infusible. The sulphur is decomposed entirely when roasted with access of air, but not so easily as other sulphides; it is required to be reduced to a minute division. If they attempted to roast sulphide of zinc, or common blende, in constructions like a common lime-kiln they would find this difficult. If iron pyrites were present this would facilitate the operation. He should, however, reserve his observations on this subject until he came to treat of Augustin's method for reducing silver. Nitro-muriatic acid attacks zinc strongly, sulphuric and hydrochloric but feebly. A basic compound of oxide and sulphide of zinc was here shown and described by the lecturer. Nitre energetically attacks sulphide of zinc, both elements being combined. He would now come to the ores of zinc; there were but two—the first the carbonate of zinc, or calamine. This consists of one equivalent of oxide of zinc, and one equivalent of carbonic acid, the percentage of the metal being 52.02; this had a variety of colours, often with an enamelled surface. They had as well a silicate of zinc, called calamine; this contains 52.83 per cent. of metal, and there was an anhydrous silicate, called Willemite, that had the same composition, minus the water. The next ore was blende, so called from its deceitful appearance. It appears that many years ago, according to Bishop Watson's essay, much of this had been purchased in Derbyshire for galena; and not long since a company was formed for the purpose of working plumbo, which turned out to be mica-calcite iron ore, and these mistakes were even now occurring: the colour is sometimes white, but rarely so. In this mineral cadmium has been found at Przibram, in Bohemia; it consists of one equivalent of oxide of zinc and one of sulphur. The red oxide of New Jersey, in the United States, contains manganese. The chemistry of the reduction of zinc was very simple; either if they took the calamine or sulphide, it was the oxide that had to work upon. The great difficulty in this process was to collect the product. The mineral is mixed with carbon in closed vessels; the zinc is then volatilised, and the carbon reduced into carbonic acid. Bishop Watson states that there were zinc-works in Bristol 100 years since, and in Plant's "History of Staffordshire" honourable mention is made of a Dr. Lawson, who made some discoveries on this subject. It appears these works were first under the proprietorship of the Champion family, and great secrecy was observed in all their operations. The furnace employed is similar to that used in glass-houses; a large fire-place is constructed, and on each side is built a level platform. The pots, six in number, are arranged equally, three on each side, closed by a circular wall; opposite to each pot there is a large opening. The furnace is built with a series of pillars; these rise up to a certain height, and are then arched over, so that the openings are left. The furnaces are heated up to a red heat; the pots are then gradually brought to the same temperature, and blocked up, merely leaving an aperture where the charge can be introduced. Beneath every pot there is a hole, where a condensing tube is introduced. The pots are charged with blende and carbonaceous matter, generally coke dust; the vapour will descend, and the zinc be condensed on the tubes and in the receptacles. This operation is called distillation per *descensum*, because it takes place from below. A process he had seen performed with the Laxey blende at Swanes was thus:—The ore had been crushed, washed, and then passed through a sieve of five or six holes to the inch; afterwards it was calcined by the waste heat of the reducing furnace, and then mixed with coke dust. A sample was here shown of that calcined with coke dust and that without. In the first instance a dirty brown appearance was shown, and in the latter a bright red, owing to the sulphide of iron. The pots are built with extreme care; they are 3 ft. 8 in. high by 2 ft. 3 in. wide; at the top they are 1½ in. thick, and at the bottom 2 in.; the diameter where the charge is put in is 9 in. Dr. Percy then described how they were manufactured by the use of a barrel, the internal portion of which served for the external portion of the pot; these were made of good clay and burnt pot; these were heated in a pot arch, and very expensive. The condensing tubes had at the upper part a flange, which is brought up close to the bottom, and kept there well fitted. The charge of ore is 5 cwt.; this was placed in a double caliner, and after being roasting for 12 hours in the upper bed was subjected to a like treatment in the lower for the same period, so that this process might be said to continue for 24 hours. The loss was about 20 per cent. The tubes are respectively 8 ft. and 2 ft. long. The flange is first brown, afterwards blue; when that occurs it is supposed that the charge is ready, and what remains is not worth saving. The process lasted 67 hours, and the quantity of coal expended was enormous, it requiring 24 tons of coal to produce 1 ton of zinc. The first product is called rough metal; the scoria is skimmed off this, and the residue is again remelted in iron pans. The processes practised in Belgium and other countries would be considered in another lecture.

IRON IN AUSTRALIA.—A letter from Melbourne says:—"New South Wales bids fair to emulate, if not surpass, the character of its prototype as a producer of coal and iron. The Mittagong mines alone are now ascertained to extend over more than 100 acres, and to consist not of ironstone, but of iron ore, yielding nearly 70 per cent. of pure metal, fused by the produce of an adjacent coal field. A company to work the same is now in active operation, and threaten to abolish the importation of iron and machinery, the average cost of which to the colony is about 400,000£. a year."

My knowledge of geology being limited, these statements of your correspondent puzzle me, especially when I glance at the physical appearances of this district (of the practical development of which I am not altogether ignorant), and notice so many indisputable

evidences which in no way coincide with such statements. Perhaps there are many of your readers who know the position of some of the richest Cornish mines who agree with me. But your correspondents also write, "that a good lode is a good lode, wherever it may be found, and that a promising lode is as likely to produce mineral in a new district as in an established one." Now this, I think, is the genuine opinion of Cornishmen generally. But why not the western side of any hill with the declivity in that direction; or why not sets to the north of granite? I am persuaded that the position of any lode is good when it contains the right ingredients for which we seek. Further information on these particulars will greatly oblige—*YOUNG CORNWALL.*

Redruth, Nov. 18.

Meetings of Mining Companies.

KELLY BRAY MINING COMPANY.

A meeting of shareholders was held at the company's offices, Austinsfriars, on Thursday, Mr. P. WATSON in the chair.

Mr. KING (the secretary) read the notice convening the meeting, and the minutes of the last, which were confirmed.—The accounts showed:

Balance last audit	£ 157 15 7
Ors sold	1604 19 5 = £1762 15 0
July cost, merchants' bills, &c.	£ 551 5 7
Aug. "	560 1 10
Sept. "	496 18 2 = 1598 5 7

Leaving balance in favour of mine £ 164 9 5

Mr. KING then read the report, as follows:

Nov. 16.—The 135 has been driven east of shaft about 30 fms., through unproductive ground; the lode in which is 1 ft. wide, poor at present. This end has been driven up to the point where we expected to have met with ore, if the shoots of ore which were driven through in the upper levels continued the same depth, or, in other words, existed as we calculated they would, our expectations were not then been realised, but I am sorry to say it is not the case. The communication is effected between the rise in back of the 85 west and the winze in the 45 west; here we have laid open a valuable piece of ground about 22 fms. high, and both ends of the winze are of equal value, worth on average 147 per fm., and the ground can be stopped from 37. 10s. to 47. per fm., should this shoot ore lengthen east and west it will be the most valuable piece of ground ever met with in this mine, and we have every reason to calculate it will, as the lode in the 45 east is 4 ft. wide, and worth 157 per fm. The dip of the shoots of ore in this mine generally are west, and the 45 end is about 33 fms. east of the point where the ore was first discovered—in back of the 85. The above-named end is going east, all in virgin ground, and at 12 fms. east of shaft we have commenced another cross-cut on the level, which we have driven some 8 or 9 fms. by the former company on the north part of the lode; we calculate this cross-cut will be 7 fms., and will intersect the lode 6 fms. in advance of the present end, which when done will give good ventilation, and so facilitate the getting away of the stuff; the above cross-cut is driven south 1 fm. 2 ft. The tribute department is much the same as it has been during the past month.—Eastern Mine: Watson's engine-shaft has been sunk 5 fms. 1 ft. below the 50, in favour of mica-schist, and we have during the past week met with several branches containing mica and ore, showing indications that the south lode is not far distant. We hope to be down to the 60 about the middle of January, after which commence cross-cutting both north and south towards the lodes, if the south lode is not met with when we arrive at the above-named point. The 40 cross-cut has been extended north 45 fms., and there are 2 fathoms further to drive to get perpendicular under where the lode was opened in the back; the end is in a strong mineralised cap, mixed with mica and spots of copper ore, so we do not think it prudent to suspend this end before it is driven under the perpendicular, unless a sudden change takes place. In the end driving east on the south part of the lode or branch is 1 ft. wide, composed of strong capel, fluor-spar, mica, and spots of rich copper ore, a kind of rock and embedded in congenial strata, showing indications that as it approaches the elvan course it will become more productive. I calculate our reserves to be from 50000, to 55000, worth of ore discovered in the different parts of the mine. I estimate the next three months' cost will be from 5000, to 5500, per month, including stores, dues, &c., and the returns about 130 tons of ore per month, of the usual quality. Our machinery is all in good working order. We have employed on the mine, underground and at surface, about 120 persons, including men, women, and children.—S. JAMES.

Mr. KING stated that he had received a letter from the mine, confirming a statement received by telegraph, to the effect that they had cut the north or main part of the lode in the 40 cross-cut, at the eastern mine, which had been cut into 1½ ft., and was composed of quartz, fluor-spar, mica, and stones of copper ore, and a kind of lode so far as seen. It would occupy two or three days to properly cut through it, when information of its size and character will be furnished. The 45 east was still looking well.

The CHAIRMAN said that during the last three months they had increased their balance. It must be borne in mind that during the last twelve months they had expended from 1200, to 1300, per month in sinking two shafts, and they had driven a cross-cut in the 40, which had occupied a considerable time, the more so, inasmuch as the lode took a perpendicular course, which was generally the most productive. The 14000, to 15000, profit realised on the western had been spent on the eastern mine, in pushing down the before-mentioned two shafts. In addition to which, in the months of May, June, and July, the drop in the standard made a difference of from 3500, to 4000. The reserves were now estimated at from 50000, to 60000. The 85 rise and the 45 winze were now communicated, and it was his opinion that the course of ore was worth from 80000, to 100000. A cross-cut had been pushed 20 fms., 8 or 9 fms. from the present end; they would then drive back, which would not only ventilate but also facilitate the sinking of the winze, so that during the next three months they would lay open a great quantity of ore, and from all appearance the end would turn out many thousand pounds worth of ore.

Mr. KING stated that the agent, who was a very cautious man, had estimated its worth at 207 per fm.; and if he estimated it at that sum, they might always feel assured that it was worth more. He had been to the shaft sinking on the Kelly Bray lode, and from what he saw he thought the lode was going down almost perpendicular at surface.

The CHAIRMAN said there was another lode which would be cut in the shaft. They were now about 5 fms. below the 50, and before they get down to the 60, they would intersect the south lode and underlay to the shaft on King's lode, which was quite as promising as the old Kelly Bray lode.

The CHAIRMAN, in answer to a question, stated that their reserves, he thought, could be estimated at about 10,000.

Mr. KING said that, in estimating the reserves, they could only give 5 fms. up and down from where they were opened upon the lode; they can only estimate that which has been passed through. He thought 10,000, was but a fair estimate.

The CHAIRMAN stated that the cost has been less than the agent had anticipated, and the returns had increased. The present agent was a very cautious man; he had never over-estimated the mine—it fact, he had under-estimated it.

After some conversation, in which it was stated that from 14000, to 15000, had been expended in developing the eastern mine during the past 12 months. The accounts were passed. Messrs. Field, Mackay, Richards, Norden, and P. Watson, were elected the committee of management. A vote of thanks to the Chairman, for his perseverance in having brought the mine into its present satisfactory position, was then accorded, and the proceedings terminated.

SOUTH LADY BERTHA MINING COMPANY.

An adjourned special meeting of shareholders was held at the company's offices, Threadneedle-street, on Monday. Mr. WATKINS in the chair.

Mr. FULLER (the secretary) read the notice convening the meeting, and the minutes of the last, which were confirmed.

Upon the resolution passed at a previous meeting, that all shares in arrears of call be absolutely forfeited, Mr. ROBERTSON, being one who stood in the condemned list, thought the forfeiture of such shares, under the circumstances, unjustifiable; for had certain shares been sold when a good price could have been obtained, the necessity for a call would have been obviated. At the first general meeting that he had the honour to attend, a lien upon the mine was presented by certain individuals, and who, in respect of that lien, had claimed and taken a certain number of shares. And, upon discussion, it was found that this claim had never undergone investigation. What was it for?—how was it made? This lien amounted to £357, and against its payment he most distinctly protested. By the payment of this claim, which had sensibly decreased the assets, shareholders were unexpectedly required to pay calls to liquidate liabilities that ought never to have existed. He thought this matter ought not to be allowed to remain in abeyance. These matters ought to be seriously considered before they forfeited a man's property, without giving him the slightest chance of pleading his case, and averting such an evil.

The SECRETARY said the special meeting had been convened by requisition, and the present was merely an adjournment of the special meeting. Proper notice had been called to every shareholder.

Mr. LANE said, that, although they had been called together for the forfeiture of shares, he questioned the legality of the proceeding, unless there was a rule or by-law extant in the company's regulations. He had heard something about these 1000 shares, which he thought ought to have been sold for the purpose of carrying on the mine, and for which he had been told 4s. per share had been offered.

Some discussion ensued as to the legality of forfeiting shares in arrears of call, when it was proved by the company's regulations that a special general meeting was empowered, due notice having been given to, to declare absolutely forfeited all shares upon which calls remained unpaid.

The CHAIRMAN said the special meeting had been convened by requisition to forfeit shares in arrears of call. Certain gentlemen had pleaded their own case; the shareholders sympathised with the plea, and granted an extension of time. It was then decided to meet on that occasion, to forfeit all such shares.

Mr. LANE contended that if the before-named 1000 shares had been sold there would have been no occasion to make the call; and if that latter call had not been made these assets would not have taken place.

The CHAIRMAN submitted that the matter was entirely in the hands of the shareholders. It was for them to say whether more time was to be allowed. He would be the last to throw any impediment

in getting up the mine, amounting to £350. He, for one, resisted that claim. The matter was discussed at the general meeting, when it was resolved that a lien should be placed upon these shares; and he should like to know when the payment of that lien was sanctioned? Surely the present shareholders, in common equity, had no right to pay the preliminary expenses of the promoters, when the shareholders could not pay their own cost-share.

A long discussion ensued, when it was resolved—"That the committee be authorised to sell 500 (part of the 1000) shares vested in trustees, at such price or prices as the majority of the committee, at a meeting to be called for that purpose, shall determine, at not less than 10s. per share."

It was then proposed—"That the committee investigate the lien of £350, and report thereon to the shareholders, and in the meantime the allowance of that sum in the accounts be suspended." An amendment was then put—"That the lien of £350, having been settled, shall pass in the accounts." This, upon a show of hands and the number of shares held, was declared carried.

After some further discussion, it was agreed that the accounts be received, subject to further investigation—Mr. Robertson and Lieut. Watson being appointed for that purpose.

The SECRETARY then read the report of Capt. Goss, which was considered of a very satisfactory character. Meers, Gully and Key had assayed some copper ore, and had returned it at 12½ per cent., and worth about 12½ per ton. There were 35 tons of ore ready for the crusher. The Secretary said it was very desirable that a crusher be erected, the consideration of which it was resolved should be left to the committee.

A call of 2s. per share was then made, payable within 21 days, and a discount of 5 per cent. to be allowed if paid on or before that day. The committee were elected.

A vote of thanks to the Chairman terminated the proceedings.

WHEAL HARRIETT MINING COMPANY.

A general meeting of shareholders was held at the company's offices, Austinfriars, on Friday.

Mr. MATTHEW in the chair.

Mr. KING (the secretary) read the notice convening the meeting, and the minutes of the last, which were confirmed.—The accounts showed:—

Balance last audit	£352 3 6
July cost, merchants' bills, &c.	341 17 7
August cost	295 5 6
Sept. cost	286 2 1 = £1278 8 8
Call received	£512 0 0
Copper ore sold	630 0 10
Tusstuf sold	50 4 2 = 1192 5 0
Balance against mine	£ 86 3 8

The following reports were read:—

Nov. 6.—Since the last quarterly general meeting the 100 cross-cut has been driven south from engine-shaft 4 fms. 6 ft. 6 in., which is 10 fms. 2 ft. 6 in. from shaft. At this point we cut the caunter-lode, since driven east on its course 9 ft.; the lode in present end is 2 ft. wide, composed of spar, peat, mudi, with stones of tin, and letting out pretty much water, but as yet has not drained the lode in the 90. As I intend at once to sink from the 90, to prove the lode and for ventilation, in consequence of the water being so much in the bottom of the level, we cannot as yet proceed with it. The 90 has been driven east on the main lode 6 fms. 3 ft. 6 in.; lode in present end 1 ft. wide—poor. This end is now 16 fms. 3 ft. 6 in. from the cross-course in the 74; where we first met with ore, is 3 fms. east of this end; and the winze now sinking below the 74 is about 11 fms. east of this level. I hope very soon to see a good improvement in this end. The winze has been sunk below the 74 fm. level 4½ fms.; lode in bottom of winze 4 ft. wide, worth for length of winze (10 ft.) 40s. per fm.; if this lode continues to the 90 equal to what we have sunk through, we shall then be able to take away the lode much cheaper and with a great deal more speed. The 74 has been driven 5 fms. 4 ft. 9 in.; the lode for this distance has produced a little ore, not sufficient to pay for stopping back or bottom. The lode in the present end is 1½ ft. wide, producing saving-work for tin and copper ore; this is an improvement in the last 2 ft. driving, and from appearance we may expect a further improvement. The lode in the back of the 74, over the winze, is 2 ft. wide; worth for copper ore 20s. per fm. The lode in the deep adit, east from eastern stop, is 1 ft. wide, producing stones of ore; 9½ fms. behind the present end the lode for 9 ft. in length produces from 107 to 157, worth of ore per fm.; 55 fms. east of present end is a large cross-course. In Durham and other mines where this cross-course has passed through the lode, near to it has been found large deposits of ore; and on this lode, from the west of Barre's shaft to the engine-shaft, there has been a large amount of ground taken away at a good profit above this level; therefore, in continuing the driving of this level, and until we reach the cross-course, there is a great chance of meeting with a bunch of ore that will amply repay the cost incurred. In exploring this piece of ground, and what I would advise doing with all speed. I have weighed off the copper ore sold on Thursday last. No. 1 parcel, computed 54 tons, weighed 54 tons 4 cwt., 2 qrs., at 51. 10s. 6d.—2997. 10s. 7d.; tin stuff sold to-day, 107. 17s. 6d.—3107. 8s. 1d. From the present appearance the returns for the next three months will about equal this last sale—say 150s. per month, and cost, including merchants' bills, 280s. per month.—S. WILLIAMS.

Nov. 17.—The caunter lode in the 100 is 1½ ft. wide, producing stones of tin. The main lode in the 90 is 1½ ft. wide, composed principally of peat, and producing stones of copper ore. The lode in the winze sinking below the 74 is at present small and poor. The lode in the 74 end east is 1 ft. wide, producing 1 ton of ore per fathom. The lode in the rise and stop over the 74 fm. level is worth 4 tons of ore per fathom. The lode in the deep adit is divided with a horse of granite; the south part is 4 in. wide, producing stones of ore; the north part is 2 in. wide, a good branch of ore for this width, and from the bearing of the branches in a few feet further driving they will again come together, which is very promising for an improvement. In consequence of the lode falling off in value in the bottom of the 74 winze, and that it is not wanted for ventilation of the 90 end, I think it advisable we should suspend for the present the further sinking, and put the men to stop the lode east and west; by doing this, we shall raise ore to meet more of the cost, and prove in what direction this bunch of ore is dipping.—S. WILLIAMS.

Mr. KING (referring to the adjournment of the meeting), stated that the committee had thought it better to adjourn the meeting for a week, till his return from the mine. He had examined every book and account at the mine, and had found every merchant's bill charged up. He thought the winze sinking below the 74 was not looking so well; the 74 end was coming into ore, now worth 1 ton per fm. The 90 end had increased in size, and showed indications of coming into ore ground. The 100 end was producing rich stones of tin, and as it approached the cross-course he had no doubt but that they would meet with a bunch of ore. He had had some conversation with the agent upon continuing driving the deep adit 40 fathoms from surface going east, and the agent was of opinion that this should be continued, as the shallow adit had gone through a good bunch of ore. The great cross-course, which had done so much for the north and south mines, was 30 fms. in advance of the end.

Some conversation ensued, in which it was stated that the balance against the mine, which at the last meeting was 360s., had been decreased to 86s. The report was considered very encouraging. The accounts were passed; and a call of 2s. per share was made, payable in 14 days.

The CHAIRMAN stated, in accordance with a resolution passed at the last meeting on the subject of forfeited shares, the committee had consulted a solicitor perfectly acquainted with the Statuary Laws and the Cost-book Principle, whose opinion was that, as a precedent had been established of restoring shares by the payment of the arrears of call with 5 per cent. interest, and as the shares were still standing in the names of the committee of management, he should recommend the company to restore the same on complying with the above terms. But had the company sold the shares by public auction, the case would have been different. Some conversation ensued, when

The CHAIRMAN said the committee thought it advisable that a resolution should be come to on the subject.

It was then resolved—"That the 80 shares standing in the names of the committee of management be restored on the parties paying the arrears of call with 5 per cent. interest."

A vote of thanks to the Chairman terminated the proceedings.

ALDEN AND QUÆNANGEN MINING COMPANY.

The annual general meeting was held yesterday, at the offices, No. 2, New Broad-street, Mr. J. LABOUCHE in the chair.

After the SECRETARY (Mr. E. J. Cole) had submitted the minutes of the last meeting, which were confirmed, the following report was read by Mr. Woodfall, a director:—

The directors informed the shareholders, at the meeting held in July, that the result of the past year's operations, as well as the then prospects of the mine, precluded their expressing a favourable opinion of the future operations of the company; and that, consequently, they had sent instructions to the manager to reduce the establishment and the expenses generally, unless a very material increase in the produce from the different lodes took place. The produce from the Raipas Mine had fallen from 3 to 1 ton of copper monthly, the Old Mine from 7 to 3 tons monthly; and in the face of this serious deterioration of the two principal mines the directors could not speak otherwise than dismally of the future. The manager has seen the necessity of reducing the expenses, and has taken measures for carrying out the views of the directors; and he writes that the cost for the second quarter will be less than the first, and the cost for the third quarter, ending Dec. 31, 1858, much lower. In reporting now upon the mines, the directors are glad to be able to state that considerable improvement has taken place. At the Old Mine, the lode below the slide in No. 1 winze is looking remarkably well; and in No. 3 winze, which is being sunk at the distance of 90 fathoms north of No. 1, there is every prospect of meeting with a good result, from the appearance of the ground. The produce of the mine has again increased from 3 tons to 6 tons of fine copper per month, and the ore is of a much better quality. At Raipas Mine, the quality of the ore from all the workings is now better than for many months past, and the produce is somewhat increased, being reported for October rather over 2 tons of fine copper. The other mines at Kaafjord have produced small quantities of ore, and promise to assist the general yield of copper ore for some time. The Quænangen Mines, upon which the directors reported recently most favourably, continue to hold out very excellent prospects.

The Lode E is as rich as at any former period, and there is no fear, apparently, that any falling off will take place; on the contrary, the chances are that fresh discoveries of mineral will be made of some importance at this and other lodes in the immediate vicinity of Lode E, and tend considerably to increase the returns. In driving a cross-cut towards Lode D, a new lode has been intersected, which is found to be 3 ft. wide, composed of greenstone, well mixed with yellow ore, and this lode is now being prosecuted.

The Lode D, which formerly was the richest working at Quænangen, will shortly be intersected by the cross-cut, which is being driven in favourable ground; and should the lode be found as good as at the surface, a considerable increase in the returns may be expected. On the whole, the prospects of the mines have considerably brightened, and the result of the present year will, it is expected, leave a satisfactory profit on the operations. The produce of the mines for the first seven months of this year's operations has been as follows:—April, 137 tons ore, 879s. copper; May, 167 tons ore, 9640 tons copper; June, 190 tons ore, 11335 tons copper; July, 231 tons ore, 13914 tons copper; Aug., 209 tons ore, 12735 tons copper; Sept., 274 tons ore, 13110 tons copper; Oct., 244 tons ore, 14880 tons copper; total, 1452 tons ore, 84619 tons copper; which explains the very great improvement alluded to by the directors in the former part of this report.

The accounts for the twelve months ending March 31 last are now before the meeting, having been duly audited, showing a debit balance of 22651. 5s. 7d. on profit and loss account, of which the sum of 4617. 14s. 8d. was the balance brought down on the previous year's account, and the sum of 18037. 10s. 1d. is the actual loss on the year ending March 31 last.

The CHAIRMAN observed, that they would see from the report that it was one of the most favourable which had been presented to them for several years. Their expenditure had been reduced, and during the last few months the percentages of the ore had increased—in fact, although they were reducing less mineral, they were obtaining more metal. Their copper still maintains its high character. According to the estimates of the manager, the produce would reach this year the amount of 180 tons of copper, and next year he estimated it would be 200 tons. Under these circumstances, he thought there was reason to congratulate the shareholders on their prospects.

Mr. THOMAS enquired whether the improvement which had been discovered in the Old Mine was likely to be permanent?

Mr. COX observed that last year, when Mr. Thomas was in England, he had stated that if they cut the slide in the Old Mine, it would give a lease of 20 years to the mine.

Mr. WOODFALL observed, that hitherto they had not found the lodes increase in value as they became deeper. In general, the rule was that they were deteriorated; this, however, was not the case with the one in question; it was found equally as good depth as at surface.

He was himself of opinion that they were in a more favourable position than they had been for several years past.

The report was then put, and carried unanimously.

Mr. THOMAS said, he was deformed by the heart sick. He had but a little interest in the company—in fact, from the disheartening reports put forth from time to time, he had considered his property of no value; he should, however, now begin to think, from the report he had heard to-day, that there were reasonable hopes of their obtaining a dividend at no distant day.

He did not think the meeting should separate without passing a vote of thanks to the Chairman and directors for their able management of the company's affairs. This was seconded by Mr. SPOON, and unanimously carried.

The CHAIRMAN, in returning thanks, observed that it was a considerable source of gratification to the directors to find their conduct approved by the shareholders. Late

they had not been so prosperous as they wished; he trusted, however, that as the prospects were now better, the next meeting would be under more favourable auspices.

In the meanwhile, he could assure them that no exertions should be wanting on the part of the directors to further the prosperity of the undertaking.

The proceedings then terminated.

MINING MARKET.—We have received the following communications:—

From Mr. JAMES CROFTS: The writer, last week, being unable to pen his usual remarks does not, on that account, think it necessary to omit a notice of the exposition of the political position of the country, and its foreign relations, at the meeting of the City notabilities on Nov. 9, by the Prime Minister; a more satisfactory, indeed, and apparently honest, display of oratory not having been uttered by any Minister, Whig or Tory, within the last half-century; but it is to its bearings upon the commercial interests of the country, and its foreign trading relations, that more particularly falls within the scope of the writer's appreciation, since we learn from this high official source that there is a decidedly favourable change, both in the Home and Foreign Departments, whether as regards exports, imports, or trade, and a soundness in monetary matters, which is still more to be hailed as the forerunner of a season of prosperity probably more stable than that has been left by any antecedent crisis. The positive cordiality existing between this country and France can scarcely be passed over without remark, when it is considered that the French nation, from increased intimacy with England, cannot fail to become embroiled in time with the absolute wisdom and necessity of free trade, by opening her ports to English manufacturers at lower duties, and thus encourage a reciprocity in the shape of a modification of the import duties on our side in French manufactures, and of the great staples of France, but of wines in particular, and also teach a great commercial lesson to other countries less enlightened upon the principles which involve their own interests in the exchange of surplus wealth as between nation and nation, wherever situated.

The influence of the preceding circumstances upon the mining market has, during the last fortnight, been conspicuous, and at the time we write there is a solid and apparently permanent favourable change come over mining affairs. Dividend mines have been so largely dealt in, that it would be difficult to attempt an enumeration, but amongst the shares so changing hands may be mentioned as conspicuous Mary Ann, Trelawny, South and West Cadron, Providence, Vale of Towy, and Par Consols. A proof of the large business alluded to in such shares is thus given of the growing determination on the part of the mounted public to invest in securities, in spite of the occasional untoward suspicions of their intrinsic value, and there can be no doubt that a new era is about to open upon the mining interests of the country, which will place them on a better and more confidential footing. Provident shares have, however, given way somewhat in value, although they are openly offered in the market for the forthcoming quarterly dividend, to be declared about the 25th inst., and which, it is reported, will be 4s. per share. A rise of 3s. in the value of tin will also assist all tin shares, and especially the largely-producing ones, whilst an advance is also anticipated in copper. The fact of such mines as Trelawny and Mary Ann being sustained in value is owing, probably, to the large quantity of silver contained in their ores, whilst lead itself, as substitute of silver, is rather on the drop. A much venerated mine (extended also to a certain individual, who has, from strong convictions of its ultimate worth, always been its advocate) has this week given strong signs of permanent vitality, in a very considerable improvement in the lodes, and consequently an addition to the value of the shares of 60 or 70 per cent., within a very few days—the mine alluded to being Catherine and Jane Consols, Merionethshire, now in the much reduced number of 7149 shares. The writer, in fact, has been by an anonymous writer in the *Mining Journal* accused in no very courteous tone of habitually "puffing" this mine, and the charge is made (unfortunately for the said writer) just at the moment when the mine requires not the slightest advertisement from any one, but will stand from this day on its merits alone, and in the course of the year 1859 it is probable that the price of its shares will be 10s. per share.

Great improvements, and which have led to an extensive business in the shares, have been made in Lady Bertha and Kelly Bray. The former, from 10s. per share, advanced to 30s., 31s., and large buyers. Suddenly, to-day only, there is a reaction to 28s., 29s., probably from the preponderance of sellers—a wise resolve to avail of a large speculative profit, although the fact is well authenticated that there are rich mines now working upon Kelly Bray. Kelly Bray have experienced a similar rise; and from the writer's inspection of the plan and working of the mine, it would appear that there is a mass of copper ore (mixed, however, with blende) between the 45 and 85, developed by Kelly Bray, or old engine-shaft (now down 135 fms. deep), and should the ore continue between the winze and rise in the 45, it is estimated the value of this patch of ground for ore is not less than 10,000. The transactions in the shares have been very extensive—up to 2½ to 3½ per share, in 5000 shares, moderate numbers still, therefore, a moderate price for them. Wheal Addams have suddenly given way somewhat in value, but so far as the mine is concerned without apparent cause. Probably they had risen too rapidly, and when the reaction comes, as is a natural consequence of the advance, they lack efficient support—one-half the mine, it is stated, being held by a single adventurer.

From Wheal Arthur the latest news confirms previous reports as to the value of the north lode in the eastern mine, which is yielding 3 tons of copper per fm. The shares are firm, and a fair amount of transaction in them. Penrice very good shares, and a large business. East Wheal Russell has advanced, and the mine looks favourable in all points.

North Rhine shares are far the most important almost a forgotten article—a dangerous statement having appeared in the last *Journal* touching a charge of "reputation" by a large shareholder, which the said shareholder may be considered tolerably competent to repeat if untrue. The writer has no desire to identify himself in this connection, but looks to the mine as likely, under good management in all respects, to pay handsome dividends to the shareholders; and his recommendation is that the shares should be largely bought at the present low price. A sudden demand, but from causes perfectly invisible to the uninitiated, sprung up for Dore shares, and from 4s. or 5s. to 10s. they advanced to 10s., but now rate steadily, sellers 7s. to 8s.

Is the Pipe vein cut? To help this question to a solution, it must be stated that the impetus which moved the shares from almost total oblivion is supposed to have come from a county where there are several very large shareholders. North Rhine shares have been dealt in at about 5s. premium, 10s. paid, and continue a favourite in all points.

Speculative stock. Great Barrier Land, 5s. shares, with 30s. per share paid up, are not of a speculative property, although the fact is well authenticated that there are rich mines in Lady Bertha and Kelly Bray. The writer has purchased several lots of these shares, which are a class that continue attractive, independently of the large number of shares in which they are constituted—60,000 the former, and 10,000 the latter.

Two new British mines, on an unprented scale, have been lately brought before the public, and as the management must be assumed to be fair, the shares are finding favour, as much, probably, on account of the price being moderate, as the proximity of other mines of more or less celebrity. Lady Eliza Lead (Limited) is in the county of Carmarthen, in 2500 shares, of only 2s. each. Denbigh Bridge (a copper set in Devon), near Lady and South Lady Bertha, is in 4000 shares, the price being only a few shillings per share. Some preliminary work has developed one or two good copper lodes, and from 4s. to 5s. they advanced to 10s., but now rate steadily, sellers 7s. to 8s.

As the Pipe vein cut? To help this question to a solution, it must be stated that the impetus which moved the shares from almost total oblivion is supposed to have come from a county where there are several very large shareholders. North Rhine shares have been dealt in at about 5s. premium, 10s. paid, and continue a favourite in all points.

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at once to raise and dress the silver gossan from the adit level. By assays made by Mr. Mitchell and others in London, this gossan is ascertained to contain 40 ozs. of silver to a ton; but this gossan is not from the lode which in North Dolcoath is so very rich, but from the engine lode further north. The agent hopes that he shall find gossan still more payable on the North Dolcoath lode as soon as the adit is cleared. I hope, and believe, that the adventurers will succeed in their speculation. I find that the mine is in 4000 shares of 2s. each, 12s. of which is paid up, and that the company is registered under the Limited Liability Act. The agent says that the company have no wish to exaggerate the value of the property, which, he thinks, will soon speak for itself in the market produce.—AS AGENT: *Camborne, Nov. 15.*

WEST ROSEWARNE UNITED.—The resolution of the company to sink the engine-shaft appears to me a judicious one: to abandon a mine so situated, and so slightly developed, would be very likely folly.

WHEEL MARY EMMA.—I really do not know of a better piece of mining property than is now opening at this mine. The shaft, which is sinking as fast as possible, is improving, with every prospect of a fine course of copper ore. Large rocks of rich tin, as well as copper, are now in the shaft, and excellent work for tin left for stoping.

PENHALDARVA.—There were sold on Nov. 13, 23 tons of lead ore for 43s., making a total of about 120 tons for nearly 2300/-, though it is only just two years since the lode was first cut at 9 fms. deep. Since then good machinery has been erected, the shaft sunk nearly 30 fms., and levels driven considerable distances. There are 512 shares, and, looking at the progress already made and the prospects, this may be considered one of the best investments that can be made. South Garas, another lead mine in the same parish, has just paid its first dividend.

DEVON AND COURTEENAY.—The great improvement in East Russell has attracted much attention to this sett, which adjoins eastward, and traversed by the same lode that is now looking so well and bids fair to turn up such a great prize in East Russell. This lode is accompanied in Devon and Courtenay by a fine elvan, and can be easily worked by an adit close to the River Tavy, which would leave high banks, or a shaft could be sunk by the aid of the present machinery. Shares are about 16s., the price of East Russell not long since.

ETAM (DERBYSHIRE).—**THE BRANDY BOTTLE, PROVIDENCE, AND EDGE RAKE MINES.**—A meeting was held on the 4th inst., at the Bold Rodney Inn, Eyan, to inspect the plans and estimates of these celebrated mineral veins, with a view of bringing them into working operation. The estimate, plans, and terms of agreement were laid before the meeting and explained by Mr. F. Cocker, mineral agent, Eyan, when it was stated that the lead ore obtained from these veins yields no less than 70 per cent. of lead, and that a continuation of one of the celebrated Eyan Edge veins. It was also stated that the present workings of the Brandy Bottle are at the junction of the Golden Ball, the Near Edge, and the Far Edge veins, and that the work done hitherto has been only for discovery, consequently the workings are only reached by narrow contorted gates, aiding sumps, and every other characteristic of want of capital to develop the resources of veins which are believed to be beneath, and to yield no less than 18 cwt. per fm. The opinion was confidently expressed that a plumb shaft was the only desideratum to make these works very profitable. The above mines are situate in the manor and liberty of Tideswell, and pay one dish in twenty for lot and cope, and one in forty for tithes. One point was particularly noticed and commented on—that the workings were below the amygdaloid stratum, or channel, a circumstance of much interest, as the ore has a tendency to increase downward under this stratum. An adjourned meeting, to be held at the same place, was fixed for the 25th inst.

Great Reticlack Mine.—The discovery of blende at this mine still continues, and the miners are enabled to raise considerable quantities; a sample cargo will shortly be shipped, after which we shall be enabled to offer a more correct opinion of the value of this important mining property. The mine, belonging to four parties only, will—as all appearances warrant the hope of—prove a fortune indeed.

GOLD IN ENGLAND.—Smelters are seldom guilty of paying more for mineral than it produces. From Swanpool Mine, a parcel of 200 tons of this much-disputed mineral has been smelted; the yield has been highly satisfactory for lead, silver, and copper—*mirabilis dictu gold: 40%*, were paid for the gold contained in the silver. We doubt not all the argenteous ores contain the precious metal in a greater or less degree. We are promised full particulars of a series of experiments to be made on the ore of this mine, which we purpose publishing in detail.

FOREST OF DEAN.

Mr. H. G. Nicholls, M.A., has published a work of very considerable interest and importance—“A History of the Forest of Dean,”*—which is particularly acceptable at the present moment, from the fact of much attention having recently been directed to the mineral wealth of that locality. The Forest of Dean is situated within that part of Gloucestershire bounded by the Rivers Severn and Wye. Probably the earliest trace of this locality being inhabited exists in the Druidical rocks which are found on the high lands, on the Gloucestershire side of the Wye. Next in order of time to the above remains are the ancient iron mines, called Scowles (probably a corruption of the British word *croft*, or *caave*), which were doubtless worked by the Romans. This appears certain from the coins which have been found deeply hidden in the heaps of iron cinders derived from the working of these mines. Coins, *shilling*, &c., used by the Romans have frequently been found; and so lately as A.D. 1839, a man who was employed to raise some stones in Crabtree Hill (which is situate near the centre of the forest), of which several heaps were lying on the surface, in turning over the stones found about 25 Roman coins. The next day, in another heap, about 50 yards distant, he found a broken jar or urn of baked clay, and 490 or 500 coins lying by it, the coins being for the most part of Claudius II, Gallienus, and Victorinus. The spot is rather high ground, but not a hill or commanding point, and therefore does not appear any traces of a camp nor any. There was no appearance of mortar, but the stones had evidently been used for building, and part of the foundation of a wall remained visible. A silver coin of Aurelius was likewise picked up.

Edward the Confessor is stated in “Domesday Book” to have exempted the Forest of Dean from taxation, with the object apparently of preserving it from spoilation. Probably in those early days the king possessed the right to all lands not under cultivation, or already apportioned, just as the sovereign of our own day exercises that right in our colonial territories, and makes specific grants to private individuals. A careful examination of the oldest copy extant of the “Miners’ Laws and Privileges,” regarded as Mr. Wyrall tells us, writing in 1780, as the “Magna Charta of our miners and colliers,” incontrovertibly proves that it belongs to this period (1282). It was first printed in 1687, from a manuscript copy preserved in the deputy-governor’s office, to which a postscript is added, “written out of a parchment roll, now in ye hands of Richard More, of Cloverwall, June 7, 1673, by Thomas Davies.” The date of the compilation has heretofore been considered as determined by the wording of the short introduction with which it is prefaced—“Be it in mind and Remembrance what ye Customs and Franchises hath been that were granted tyne out of Minde, and after in time of the Excellent and redoubtai Prince, King Edward, unto the Miners of the Forest of Deane and the Castle of St. Briavells,” &c., in which words it will be observed that only the name of King Edward is mentioned, the number not being added, although for some cause or other all modern copies insert “the third,” and hence the impression that the collection was then formed; whereas the description given in the paragraph immediately following, specifying what were then the limits of the forest, shows its date to be that of the first of the Edwards, since the bounds are therein recorded as extending “between Chelstone Bridge and Gloucester Bridge, and so far into the Seaseasome as the blast of a horn, or the voice of a man, may be heard.” But these limits ceased to prevail soon after the beginning of the 14th century, and, consequently, an earlier date must be assigned for the above record than has commonly been given to it. The body of the document originally, it would seem, unbroken, as now printed, is divided into 12 paragraphs or sections, but expressed in very rude and involved phraseology, confirming its antiquity, as still further appears by the nature of the incidents which it contains. It specifies first of all the franchises of the mine, meaning its liberties and privileges, as not to be trespassed against, and consisting apparently in this, that every man who possessed it might, with the approval of the king’s gavelor, dig for iron ore or coal where he pleased, and have right of way for the carrying of it, although, in certain cases, “forbids” to sell might be declared. A third part of the profits of the undertaking belonged to the king, whose gavelor called at the works every Tuesday “between matins and mass,” and received one penny from each miner, the fellowship supplying the Crown with twelve charges of ore per week at twelvepence, and three charges of coal at one penny. Timber was allowed for the use of the works above and below ground. Only such persons had been born and were abiding in the forest were to “visit” the mines, in working which the distance of a stone’s throw was always to be kept, and property in them might be sequestered. The miners’ clothes and light are mentioned, and the standard measure called “bells,” to the exclusion of carts and “waynes.” It alludes to “the court of the wood” at the “speech” before the verderers, but more particularly to the court for debtors at St. Briavels Castle and to the mine court, as regulated by the constable, clerk, and gavelor, and the miners’ jury of 12, 24, or 48, where all causes relating to the mines were to be heard. “Three hands,” or three witnesses, were required in evidence, and the oath was taken with a stock of holly held in the hand. “The miners of Mitchel Deane, Little Deane, and Ruer Deane are called ‘beneath the wood.’” It also appears that at Carleton, Newport, Barkley, Monmouth, and Trellech, the manufacture of iron was carried on by “smiths,” who were connected with smithholders living in the forest, and supplying the ore, at each of which places it is remarkable that iron cinders have been found. The document concludes with the names of the 48 miners by whom it was witnessed, confirmed, and sealed. Such, then, were the mining privileges and regulations existing among the operatives of the forest at this period (1300), which, by their settled and methodical character, bear out the statement made in the preface to the “Customes,” &c., that they had been granted “tyne out of minde,” and, consequently, were more ancient than the sieges of Berwick, to which, it appears, many of the forest miners and bowmen were summoned, and received for services then rendered their peculiar rights.

The reign of Elizabeth brings us to the date of an incident more generally notorious, than any other in the history of Dean Forest—it intended destruction by the Spanish Armada. Evelyn, in his “Silva,” thus mentions it:—“I have heard that in the great expedition of 1588, it was expressly enjoined the Spanish Armada that if when landed they should not be able to subdue our nation, and make good their conquest, they should yet be sure not to leave a tree standing in the Forest of Dean.” Were it not that he particularly states that he had “heard” the report, we should conclude that he obtained his information from Fuller’s “Worthies,” published two years previously, where it is mentioned with this only difference, that “a Spanish ambassador was to get it done by private practices and cunning contrivances.” Fuller had probably read this account in “Samuel Hartlib, his Legacy of Husbandry,” published in 1655, where, speaking of the deficiency of woods at that time, he writes—“The State hath done very well to pull down divers iron-works in the Forest of Dean, that the timber might be preserved for shipping, which is accounted the toughest in England, and where it is dry as dry as iron. The common people did use to say that in Queen Elizabeth’s days the Spaniards sent an ambassador purposely to get this wood destroyed.” In February, 1612, William, Earl of Pembroke, obtained a grant* of 12,000 cords of wood yearly for 21 years, 17s. per cord, being 2400/-, and reserving a rent besides of 337. 6s. 8d. per annum, “with liberty to dig for and take within any part of the said Forest, or the precincts thereof, such and so much mine ore, cinders,” &c., “as should be necessary for carrying on the iron-works left to him, or which he should erect; no person or persons whatsoever other than the said Earl to be permitted during the said term to take or carry out of the said forest any wood, timber, mine ore, or cinders without consent of the said Earl, except such timber as should be used for his Majesty’s shipping.” Soon after these leases were granted, the miners hitherto accustomed to dig for ore in the Forest resumed their work without the Earl’s consent, and an information was filed against some of them by the Attorney-General. Upon this, an order, dated Jan. 28, 1613, was made by the court that those miners, and such others as had been accustomed to dig ore in the Forest,

* “The Forest of Dean; an Historical and Descriptive Account, derived from Personal Observation and other sources, Public, Private, Legendary, and Local.” By H. G. Nicholls, M.A., Perpetual Curate of Holy Trinity, Dean Forest.—London: J. Murray. The Great Ship Company.—At length the prospects of this company, created by the various difficulties of the now nearly defunct Eastern Steam Navigation Company, has been issued. It enters into a long detail of reasons, national, political, and commercial, to show that the vessel ought to be completed, and goes into calculations showing that, when the vessel is finished and fully equipped for sea, she will realise a profit of 15 per cent., after leaving a large margin for contingencies. It appears that the Great Eastern has cost up to the present time 640,000/., in round numbers, and the old company having called up the full amount of its shares, and, in addition, incurred a debt of 90,000/., they are unable to raise further capital in any other way than that already suggested and unanimously agreed to—viz., to establish the present company, and to sell the vessel to the latter at a loss of about one-half of its cost. In this new company a great number of the shareholders of the old one (in fact, we believe all those who can afford to do) have taken shares: thus showing their faith in the ultimate success of the undertaking. The capital of the Great Ship Company is fixed at 330,000/., in shares of 1/2, each, upon which a deposit of 2s. 6d. per share must be remitted with each application for 10 shares and upwards; less than that number of shares must be paid up in full on application. The directors already appointed are to act only until the first meeting of shareholders. Mr. Brunel, the projector, is appointed engineer. The prospectus of the company will be found in our advertising columns.

* “History of the Iron Trade of the United States,” by B. F. French. London: T. T. T. & Co., 60, Paternoster-row.

upon the humble submission for their offences, and acknowledgment that the soil was the King’s, and that they had no interest therein, and upon their motion by counsel that they were poor, and had no other means of support, and praying to be continued in their employment, should be permitted, *out of charity and grace, and not of right*, to dig for mine ore and cinders, to be carried to his Majesty’s iron-works, and not to any other place, at the accustomed rates: and if the farmers of the King’s iron-works should refuse to give those rates which, as well as the number of diggers, were to be ascertained by commissioners to be named by the court, that then they might sell the ore to others: but no new diggers were to be allowed, but only such poor men as were inhabitants of the said Forest.” Passing over the period of the civil war, and the various records of the steps taken by the freeholders, inhabitants, and commoners within the Forest for the preservation of their rights during the next 200 years, which must form the subject of a future notice, we are brought to the present century, the principal legislative enactments of which relating to the Forest of Dean are familiar to our readers.

As a whole, we can regard Mr. Nicholls’s work as one of the most valuable additions to mining literature which has appeared for some time, and unhesitatingly commend it to general perusal.

THE IRON TRADE OF THE UNITED STATES.

Although the inexhaustible mineral wealth of the United States should, long ere this, have made America a nation of miners, comparatively little has yet been done towards raising mining to the position of a staple industry of the country, but the Americans are now beginning to feel that it requires perseverance to obtain far greater riches from the treasury of the subterranean world than, even in the fertile and highly favoured Columbia, can be realised from surface operations. The beds of native copper in the Lake Superior district, and the coal fields, several of which are equal in extent to entire European monarchies, have received some little attention, but unless the mineral be absolutely in sight, and in such masses that it can be converted into cash almost without labour or expenditure, the Americans appear too apathetic to embark in any mining enterprise. We may, however, now look forward to a more just appreciation by the Americans of the importance of their mineral resources, and if capital be their sole necessity for ensuring success, they will doubtless be enabled to obtain ample assistance on this side of the Atlantic. An elaborate “History of the Iron Trade of the United States,” by Mr. B. F. French, recently published at New York,* affords convincing evidence of the little which has been done in developing the iron trade of that country from 1621 to the present time, and points out the many inducements to encouraging the manufacture of iron. The rich and inexhaustible deposits may be worked with great profit in every locality, and would soon become a source of great national wealth.

The North American colonies engaged in the manufacture of iron at a very early period. In 1621 Virginia led the way, and was followed by Massachusetts in 1628. They made, however, but little progress, as the mother country adopted the policy of restricting their manufacturing spirit by administrative measures. In 1669, the British Parliament passed an Act prohibiting the American colonies from exporting any of their manufactures to Great Britain in any other than English built ships, and in 1679 a duty of 10s. per ton was imposed upon all iron imported into the American colonies. In 1731 an Act was passed directing the Board of Trade to enquire into and report on the laws made, manufacturers set up, and trade carried on by the American colonies. In the following year they accordingly reported that iron-works had been for many years established in Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Maryland, and Virginia, and from the progress they had made, it was expedient to encourage its manufacture in the colonies, especially as the production had fallen off in the mother country. The officers of several of his Majesty’s dockyards also reported that the American iron was superior in every respect to the best Swedish iron. In 1750 a law was passed permitting both pig and bar iron to be imported from London from the American colonies free of duty, but at the same time it prohibited them from erecting any rolling or slitting mill, or forge to work with a tilt-hammer, and from manufacturing steel for exportation, under penalty of 200/-.

In the following year the Governor of the several American colonies reported to Parliament that there were in operation the colonies four mills or engines for slitting or rolling iron, eleven plating forges to work with tilt-hammers, and five furnaces for making steel.

In 1761, the Governor and Council of Maryland reported to the Commissioners of the Board of Trade and Plantations in England that there were 18 furnaces and 10 forges in that State, which made 2500 tons of pig and 600 tons of bar-iron. Up to this period England had made so little progress that her production of pig-iron had only reached 17,000 tons.

The seat of the iron manufacturers in America was then principally confined to Pennsylvania, New York, New Jersey, Virginia, and Maryland.

In 1739 the Reading furnace was built, and the Warwick in 1736. The Cornwall furnace, in Lebanon county, Pa., so famous for having enriched all its proprietors, was built in 1741. In 1751 a furnace was built on the Sterling estate in Orange county, New York, which produced annually 1500 tons of pig-iron, which was worked up into bar-iron. In 1765, American iron was admitted into Ireland free of duty, and from this time forward the American colonies made rapid progress in the manufacture of iron and steel, which reached 17,000 tons.

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On July 4, 1776, the American colonies declared themselves independent, and Congress, in its session, passed a law exempting all persons then engaged in the manufacture of iron from performing military duty.

The war with Great Britain gave a great impetus to all branches of iron manufacture while it continued. In several of the colonies large quantities of charcoal, pig, and bar-iron of a superior quality were produced.

The Salisbury and Livingston bar-irons commanded high prices, and were much esteemed in Great Britain.

The Andover Works in New Jersey, manufactured during the revolution both iron and steel for the army. Mr. Cort’s invention, in 1783, gave a great impulse to its production.

After the return of peace, Great Britain flooded the American market with every description of merchandise, which involved the United States in debt, and threatened

for a time the peace and existence of the Union.

The manufacture of iron fell rapidly.

Most of the iron-works in New England and the middle States were closed by the sheriff, and the exports of bar and pig-iron were reduced below one-half.

From 1789 to 1790 the United States exported but 200 tons of bar-iron, and 3500 tons of pig-iron, so completely had Great Britain taken possession of the market.

The application of Mr. Neilson’s patent for the hot-blast greatly increased the production of iron, but the first material progressive move was the appointment of a committee by a convention of manufacturers in Philadelphia, in 1813, to report the amount of iron made in the States.

The remainder of the work is composed principally of the report of this committee, and although the particulars are not brought down to a later date than those which have long since appeared in the *Mining Journal*, the book is of great utility, as furnishing a thorough *résumé* of the History of the American Iron Trade in a compact and readable form.

MINING PROGRESS IN AMERICA.

BOSTON, Oct. 29.—For several weeks the money market has remained without material change. It is generally conceded that unless some extraordinary political commotion at home or abroad should occur, the ordinary operations and progress of commercial affairs will not, for a year at least, cause any essential rise in the rates of interest. There is a vast amount of liquidation of indebtedness yet to be accomplished before there can be any great expansion of credit. There must be in the country generally a considerable increase of private wealth, whether fancied or real, before excessive speculation can become universal.

Miners, the present activity in some of the mining shares has been due mainly to speculation.

The mails from Lake Superior, always irregular, have been unusually delayed during the present month. Notwithstanding repeated solicitations from parties interested, the Post-office department, while visiting with heavy penalties any infraction of its rules, apparently deems the mining region as of little account.

Ingot copper is dull at 24 cents, four months. Recent advices from European markets indicate that the lowest price for the above record has been touched, and from the limited supply on this side, holders are satisfied that no further decline need be apprehended.

The CENTRAL MINES product, to which a postscript is added, “written out of a parchment roll, now in hands of Richard More, of Cloverwall, June 7, 1673, by Thomas Davies.” The date of the compilation has heretofore been considered as determined by the wording of the short introduction with which it is prefaced—“Be it in mind and Remembrance what ye Customs and Franchises hath been that were granted tyne out of Minde, and after in time of the Excellent and redoubtai Prince, King Edward, unto the Miners of the Forest of Deane and the Castle of St. Briavells,” &c., in which words it will be observed that only the name of King Edward is mentioned, the number not being added, although for some cause or other all modern copies insert “the third,” and hence the impression that the collection was then formed; whereas the description given in the paragraph immediately following, specifying what were then the limits of the forest, shows its date to be that of the first of the Edwards, since the bounds are therein recorded as extending “between Chelstone Bridge and Gloucester Bridge, and so far into the Seaseasome as the blast of a horn, or the voice of a man, may be heard.” But these limits ceased to prevail soon after the beginning of the 14th century, and, consequently, an earlier date must be assigned for the above record than has commonly been given to it.

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A third part of the profits of the undertaking belonged to the king, whose gavelor called at the works every Tuesday “between matins and mass,” and received one penny from each miner, the fellowship supplying the Crown with twelve charges of ore per week at twelvepence, and three charges of coal at one penny. Timber was allowed for the use of the works above and below ground. Only such persons had been born and were abiding in the forest were to “visit” the mines, in working which the distance of a stone’s throw was always to be kept, and property in them might be sequestered.

The miners’ clothes and light are mentioned, and the standard measure called “bells,” to the exclusion of carts and “waynes.” It alludes to “the court of the wood” at the “speech” before the verderers, but more particularly to the court for debtors at St. Briavels Castle and to the mine court, as regulated by the constable, clerk, and gavelor, and the miners’ jury of 12, 24, or 48, where all causes relating to the mines were to be heard.

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as yet. In the 30, east of Nicholl's shaft, we have commenced to rise, the lode is 4 feet wide, 3 ft. of the north part of the lode yielding tin, worth about 6d. per fm. We are rising it for 3d. per fm. In the 15, east of Nicholl's, the lode is 12 ft. wide, yielding the worth about 7d. per fm.; driving for 3d. per fm. This end is about 5 fms. west of the rise in the 30. The tribute pitches in the south part of the mine are turning out very well, and the present appearance a quantity of tin from that part of mine.

WHEAL TRELAWNY.—Wm. Jeakin, Wm. Bryant, T. Grenfell, Nov. 18: Smith's shaftmen are now engaged in caving the shaft on the underlie, in order to take up and let down the pitwicks. The cross-cut at the 132 is extended east 7 fathoms towards the lode. The lode in the 142, north of Smith's shaft, is 2 feet wide, worth 18d. per fm. The south end men are removed to rise in the back of this level, to communicate with the lode sinking below the 132. The lode in the 132, north of Chipmunk's, is 2 feet wide, worth 18d. per fm. In the 120, north of ditto, it is 18 in. wide, with 7d. per fathom. South Mine: Trelawny's shaft is sunk to the 154, and the shaftmen are now engaged in cutting a plat at that level. The lode in the 142, south of the shaft, is 2 feet wide, worth 18d. per fathom. The lode in the 130 south is 3 feet wide, worth 10d. per fathom. In the 107 north it is 2 feet wide, worth 8d. per fathom. The stops and pitches are producing much as usual. We hope to sample to-morrow, all being well, about 85 tons of best, and 65 tons of second quality lead ores.

WHEAL UNION.—T. Gianval, Nov. 16: The following are our turtwork and tribute settings:—Turtwork: The 40 fm. level to drive east of the engine-shaft, on the south lode, by six men, at 11d. per fm.; the lode is 1 ft. wide, yielding stones of tin. The 30 to drive east of the engine-shaft by six men, at 3d. 10s. per fm.; the lode is 18 in. wide, worth 10d. per fm. for tin. The 30 to drive west towards the north lode, by four men, at 4d. per fm.; the lode is 4 ft. wide, producing good stones of copper ore, with indications of improvement. The lode to sink under the 20, on the north lode, by four men, at 2d. per fm.; the lode is 2 ft. wide, producing good stones of copper ore. The new shaft to sink below the 20 by nine men, at 9d. per fm. We are obliged to suspend sinking the lode in the 30, in consequence of an influx of water. Tribute: A pitch in the bottom of the 30, on the south lode, to extend from the lode 5 fms. east and 5 fms. west, by four men, at 3s. 6d. in 11. A pitch in the back of the 30, to extend from Bishop's lode 5 fms. east and 5 fms. west, and as high as the level above, by two men, at 8s. in 11. A pitch in the back of the 30, to extend from the dialling mark to join Thomas Mills' pitch, and as high as the level above, by two men, at 13s. 4d. in 11. A pitch in the bottom of the 20, to extend from the point of horse 20 fms. east and 5 fms. below, by three men, at 13s. 4d. in 11. A pitch in the bottom of the 20, to extend from Lawn's pitch 12 fms. east and 5 fms. below, by two men, at 13s. 4d. in 11. A pitch in the back of the 20, to extend from the point of horse 5 fms. west and 8 fms. east, and 10 fms. high, by two men, at 13s. 4d. in 11.

ESGAIR-HIR & ESGAIR-FRAITH MINES, CARDIGANSHIRE.

We gave an interesting and very detailed account of these extraordinary mines in last week's Journal. The richness of the lode appears to have been beyond anything then, if not since, discovered. Waller says,—"There are in the North of England many rich mines discovered, but there are none, either in England or Wales, that can pretend to come near the value of the famous mines of Sir Carbery Price. I have not read or heard of such a mine of lead in all the world as the great vein, which is 11 ft. wide betwixt its firm sides, and 7½ ft. already in pure ore, which still increases downwards, and it is not doubted but at last it will come to be 11 ft. in ore." As instances of the profits of lead mining even in those days, when that metal was so much lower in price than it is now, Waller refers to several lords in the North, who made from 7000*l.* to 17,000*l.* per annum. In February, 1700, Waller, having observed that the new discovery continued to improve, "gave Andrew Stack a guinea for his venture, and to discharge his bargain; and afterwards, the same day, set the same bargain of 100 tons to John Pryse and partners, at 14s. per ton, the vein being then gathered into a solid rib of ore, about ½ yard wide, and in some places 1 yard wide, in firm ore, besides a rich mixture of ore and veinstone, about 5 ft. more." The lode still increased in size and richness, which was confirmed by the reports of several practical men who were called in to inspect the mines, and by shareholders who visited them. The importance of the returns may be judged of from the fact that smelting works were erected for smelting the ores, the profits of which were considerable. The mines were then in 4000 shares, and sold at 17*s.* per share; and for half the concern Sir Carbery Price was offered 40,000*l.* by an eminent London merchant, which he refused, because Waller had convinced him that a clear profit of 70,000*l.* per annum could be made. As stated last week, the present company is divided into 1000 shares of 10*s.* each, and the affairs are under the management of Mr. J. H. Murchison, of Bishopsgate-street. Within, who deserves that success which great energy and perseverance, and an independent promotion of legitimate mining, in an eminent degree entitle him to. In reply to numerous enquiries, we may state that the name of the company is the Cardiganshire Consolidated Mining Company (Limited), or, as abbreviated, Cardigan Consols.

ROYAL SANTIAGO MINING COMPANY.—A few weeks since the directors of this company issued a circular informing the shareholders that unless further funds were forthcoming it would be necessary to dispose of the property, and suggesting to the shareholders that any number of them might combine to purchase the entire property and plant as it stood, and by continuing to work the mines reap the fruits of the long labour which has been bestowed by the existing company upon them. In reply to this, "One who has paid all calls, but is not desirous of reaping that which he did not sow," explains how far more desirable it would be to borrow the small sum of 5000*l.*, which he estimate will be ample for bringing the mines into a dividend-paying condition. Surely, he argue, it would be better to raise this small sum than permit others to step in and take the profit upon the Santiago Company's capital. From this it will be seen that, considering the money already spent as utterly lost (and, as the mines must be stopped unless more capital is subscribed, this is the only correct view of the case which can be taken), the shareholders have an opportunity of acquiring an extensive and valuable property. The Santiago Mines adjoin those of the Cobre Company; yet whilst the latter have been returning many thousand pounds worth of ore per month for some years, the former have for a long time been a drag upon the shareholders. Now, it could not be supposed that the mineral contained in the two properties differed so considerably as to account for these results, and it was, therefore, concluded that the shareholders' disappointments arose simply from misfortune, in being unable to discover the lodes traversing the property. Just as apparently a good vein had been hit upon the unfortunate accident happened, which has so damped the energy of most of the shareholders that the late call has not been generally responded to; but surely when they consider the prospects of the mines, the profits which are being realised by the adjoining company, and the fact of the Cobre Company having given, but a few months since, as much for a single pertenencia as our correspondent now estimates is required for working the entire property possessed by the company, the shareholders will see the advisability of keeping the mines in their own hands. The directors have given all an opportunity of thoroughly understanding their position, and unless prompt measures be taken the property will be sold; and should such a course be found unavoidable by the directors, the shareholders will have themselves alone to blame if a fresh set of adventurers step in, and by the expenditure of a few thousands, secure to themselves large dividends.

MEXICAN AND SOUTH AMERICAN COMPANY.—In the Rolls' Court, on Tuesday, before Mr. Hume, Chief Clerk, Mr. Linklater's cases were heard. The first name called was Mr. Wm. Blanford, of Bouvier-street, Deputy-Chairman of the Plate Glass Company, an old shareholder and large operator in the company's shares. Mr. Linklater proposed to resist the payment of his proportion of the liabilities on the ground that the directors had paid dividends which had been afterwards found not to have been earned out of the profits of the company. He proposed to call an accountant and numerous witnesses to prove this. Mr. Travers Smith (for the official manager) and Mr. Compton Smith (for the representative of creditors) opposed on the ground that there was no proof of any fraudulent dealing on the part of the directors; and that, although Mr. Blanford might be at a future period entitled to relief in the appointment among the shareholders, *inter se*, it was not an answer to creditors, who must be first paid. They relied on the judgment of the Master of the Rolls in Lethertower's case. The Chief Clerk said he did not see at that period in what way the evidence proposed could release Mr. Blanford; but Mr. Linklater chose to bring forward evidence he could not shut him out. He could not, however, allow the time of the Court to be taken up, and the funds of the estate consumed, by the course proposed by Mr. Linklater, and should, therefore, call upon him peremptorily to proceed, assigning to him the 6th December to bring forward his evidence by affidavit, to turn the voluminous report of the accountant into an affidavit, and to examine any witnesses he required before the examiner. The official manager to have till the 10th December to reply, and then the whole of Mr. Linklater's cases to be proceeded with; so that, if he thought fit to take the opinion of the Master of the Rolls, they might be brought before him before Christmas. Mr. Linklater resisted this order, and asked for further time, but the Chief Clerk confirmed the order.—On Wednesday, in consequence of the arrangement made on Tuesday, there was no sitting in Mr. Linklater's cases. Thursday was appointed for considering cases of contributors, but the Chief Clerk being ill an adjournment took place.—On Saturday (this day) a private meeting of contributors will be held at the London Tavern, to consider a proposition for compounding with creditors to the extent of 62,000*l.*

RIGHT OF SHAREHOLDERS TO INSPECT BOOKS.—In the Court of Queen's Bench, on Thursday, Mr. Montague Smith and Mr. Kearnake (on behalf of the directors of the Marquita and New Granada Mining Company) showed cause against a rule granted, calling upon the company to show cause why a shareholder should not issue directing them to allow Mr. Christopher Richardson, a shareholder, to inspect the minute-books of the company. They contended that the clause in the Deed of Settlement, to the effect that the books wherein the proceedings of the company were recorded should be kept at the office of the company for inspection, applied only to the books containing the proceedings at the general meetings. It was contended, and, we think, with great

justice, that if a shareholder had a right to examine the minute-books of the board, it would be impossible to carry on the business of the company, because he could see what bargains they had made or were about to make, and might operate on the market to his own advantage and the injury of the company. On behalf of Mr. Richardson, it was urged that there was no limitation to the phrase—"books wherein the proceedings of the company are recorded." It embraced the minute and all other books kept by the directors.—Mr. Justice Erie remarked that if were so, any shareholder in a rival company might, by purchasing shares in this company, obtain a right to examine all its private transactions. It was stated that the plaintiff contended for the right of any shareholder to inspect the directors' minutes for any legitimate purpose.—Mr. Justice Erie thought they had not shown that he wanted the inspection for such a purpose. Mr. Richardson believed that irregularities existed in the management of the company, and he wished to obtain information on the subject.—Judgment was deferred. Now, without considering what Mr. Richardson's object might be, we contend that he was most prejudicial to the interests of any company to allow an unlimited inspection of their books; all that can justly be required by shareholders is the right to inspect the books of accounts during a certain period in each year, and if the progress of the undertaking appears unsatisfactory they should remove the directors, rather than make their trade secrets public.

ANGLO-CALIFORNIAN MINING COMPANY.—The liquidators have made a call of 3s. per share.

MINX GREAT CONSOLS.—Vice-Chancellor Sir W. Page Wood will appoint an official manager of this company on Dec. 2; and parties claiming to be creditors are required to prove their debts at his chambers.

GERMAN MINING COMPANY.—Master Richards will appoint an official manager, in place of Thomas Hacket and Henry James Norris, deceased, on Dec. 2.

GREAT SHEBA CONSOLS.—A meeting took place before Mr. Martineau, the Tax Master in Chancery, on Wednesday, at the instigation of the Rev. Doctor Pemberton and others, to tax the bills of costs of Mr. Hobler, solicitor, formerly solicitor to the Great Sheba Company. After hearing the solicitors to Dr. Pemberton very patiently, the Tax Master said he was of opinion the bills of costs were exceedingly fair and moderate, and recommended the parties to consult with each other before further heavy expenses are incurred by affidavit; he, therefore, adjourned the case for one week.

COAL MINERS' BENEFIT SOCIETY.—The conflict between the coalmasters in the Wakefield and Methley district continues, and both parties seem as firm as ever. The masters have twice refused the arbitration proposed by the men, as well as another offer. No doubt the sufferings which the men have been subjecting themselves to during the seven months that the dispute has continued have been great; but if Mr. Baylison's proposition for establishing the "Coal Miners' Benefit Society" is carried out, the colliers will be more than repaid for their pains in maintaining their ground. In the draft for the society it is proposed 1. Miners not under 15 years nor above 50 years of age may become members by paying a contribution of from 1s. 6d. to 6s. per week, varying with the age they entered the society, will entitle them to receive the following allowances:—2. An allowance of 10s. per week to be paid to the members during sickness or temporary incapacity of labour.—3. An allowance of 5s. per week to be paid to every member from the 60th birthday to the close of life, or during permanent incapacity of labour until death, and 4s. per week during the widowhood of any member's wife.—4. An allowance of 3s. to be paid on the death of any member, and 4s. on the death of any member's wife or widow. If a miner be 40 years of age, he will have to pay 5s. per week in order to reap the advantages alluded to. Mr. Baylison likewise observes that, should his calculations be nearly correct, it appears quite clear that the coalmasters are successful in their reduction of 15 per cent. of the money wages, and which can only be effected by starving out the men, there will be an end of the eight hours' blessing, as well as the proposed Miners' Benefit Society, and all its advantages; for supposing the miners' age average 40 years, and they commence paying 3s. per week in order to obtain the advantages hereafter alluded to, it is just the sum per week of 15 per cent. of their old wages. He hopes, therefore, the coalmasters will perceive this fact, and at once come to amicable arrangements with their workmen. And should the masters still stand out, surely the public at large and all ratepayers will insist, in a voice and manner which cannot be resisted, that the poor fellows shall have such remuneration in wages paid to them as shall secure to themselves and families a comfortable maintenance, as well as to provide funds for sickness, and for those accidents and deaths to which the dangerous nature of their employment renders them peculiar liable, and which if not provided for out of their wages will have to be made up sooner or later out of the poor-rates of the country at large.

THE COLLIER'S AND THE COAL OWNERS.—A very comprehensive statement of the origin, cause, and results of the colliers' strikes and lock-out in the Leeds and Wakefield districts has just been put forth in the shape of a pamphlet by the colliers, and adds another convincing proof of the justice of their cause, and of the overbearing manner in which they have been treated by their employers. The notices forwarded by our leading political economists, are, doubtless, well worthy of adoption; but those who take them for their guide should bear in mind that the principles laid down are intended to be applicable to all classes alike, and there is not to be one law for the rich and another for the poor. An old proverb says "that those who live in glass houses should not throw stones," yet the masters, whilst attempting to compel the men to abandon their "Union," maintain the most powerful confederacy possible amongst themselves. The colliers state that from 1844-5 the coal trade was nearly uniform in both price of coal and scale of wages; which continued up to January, 1853, when coal began to rise in price from 5s. per ton to 8s. 3d. in January, 1851—this the masters themselves admit. The colliers' wages were reduced 25 per cent., compared with the scale of 1852-3. It cannot, therefore, be said that wages should be reduced on account of the price of coal, but it is evident that wages should be reduced on account of the price of coal. The colliers have done their utmost to obtain an amicable settlement, and have, it appears, secured the sympathy of all around them, the coalmasters alone excepted, and it is to be hoped that they will be supported in their struggle by the benevolent throughout the kingdom.

COAL AND IRON IN BELGIUM.—The coal trade has increased most rapidly; in the five years from 1841 to 1845, the average quantity annually raised was under 4,500,000 tons; whereas in 1855 it had risen to 8,500,000 tons; the statement for 1856 will, it is expected, exhibit a considerable diminution, amounting in the coal basin of Mons alone to 400,000 tons. This diminution is to be ascribed to financial difficulties with France, and partly to a reaction caused by the extraordinary rapid manner in which the trade has increased of late. It is not probable that the trade in English coal will increase; the import of English coal in 1856 only amounted to 34,577 tons, although the duty was virtually nil. The iron trade has considerably improved; the production is now valued at about 90,000,000 lbs. annually, and has doubled during the last ten years. Holland, Brazil, and Turkey are the chief customers of Belgium for iron. England only exports nails. The manufacturing machinery has also become a flourishing trade; there are now in Belgium 3300 machines, of 80,000 horse power. France, Holland, and Sardinia are the chief countries of export.

GOLD DIGGING V. COPPER MINING IN AUSTRALIA.—The *Adelaide Observer* published an article on Victorian Statistics, showing that 62,236 persons were permanently engaged in the search for gold, and that they procure from the ground in the year gold to the value of 10,000,000*l.* It was also shown that that sum, divided among the number of persons so employed, would give for each 160*s.* A "Copper Miner," referring to this statement, writes—"From data within my reach I am enabled to place in juxtaposition the actual results of six months' work at each of the two principal mines in South Australia. The published report of the Burra Burra Mine for the half-year ending March 31 shows:—That the number of persons about the mine in all ways—men and boys—was 925. That the quantity of ore raised was 6304 tons, of the average produce of 23½ per cent., equal to 1511 tons of fine copper. Taking the value of fine copper in the ore to be 70*s.* per ton, which allows 35*s.* per ton for smelting charges, the 1511 tons of copper were worth 10,770*l.* That sum divided upon the 925 persons employed gives for each 114*s.* 7*s.* for the half-year. This we may double for the year—228*s.* 14*s.* During the last half-year of 1857 at the Kapunda Mine the number of persons employed, exclusive of those engaged at the smelting works, was 188. The quantity of ore raised was 2340 tons, the average produce was 15 per cent., and the calculated quantity of fine copper 303 tons. This, valued at 65*s.* per ton, leaving 40*s.* per ton for smelting charges, because the average percentage is lower than at the Burra, shows its value to be 19,695*l.*, which sum divided upon the 188 persons gives for each 104*s.* 15*s.* for the half-year, or 299*l.* per ton; the average for the two mines for the year being 213*s.* 2*s.* Here, then, it is fairly shown that actual value has been extracted from these two copper mines in the proportion of 219*s.* 2*s.* for each person employed, while those engaged in pursuit of gold on the Victorian fields have only gained 160*s.* 9*s.*, each, the difference, 58*s.* 13*s.*, being nearly 36 per cent. in favour of copper mining. All these statements are facts that cannot be controverted or gainsaid. They show how little real cause there would be for South Australians to regret the absence of gold fields if sufficient energy were applied to the proper and extensive development of the rich deposits of copper that exist in almost every portion of this province. The gold discoveries in Victoria gave a fatal check to copper mining here for a while; but it is gratifying to observe that it is again gaining ground, and it is no exaggerated anticipation to say that in a very few years copper mining will resume its position at the head of the industrial and profitable pursuits of South Australia."

GENERAL ASSOCIATION FOR THE AUSTRALIAN COLONIES.—It will be remembered by our readers that a meeting of gentlemen connected with the Australian colonies was recently held at the St. Paul's Hotel, for the purpose of supplying a deficiency long felt—that of a place of meeting for gentlemen from the Australian colonies, when it was stated by Mr. Farmer (the Chairman), who had convened the meeting, that since he had done so he had been informed of the existence of the association whose name appears at the head of this paragraph, and the object of which was explained to the meeting by Mr. Bousfield, the secretary of the association, the result of all which was the passing of a resolution by that meeting,—"That as a society was already in existence which was intended to answer the purposes of the society intended to be formed by that meeting, the present meeting requested to become members of it; and the meeting was adjourned to Monday last, to enable the gentlemen present to ascertain if the regulations of the association were such as to meet their views." A meeting was accordingly held on the day named (Nov. 18) at the same place, which was attended by Mr. Farmer, who again took the chair; Mr. Youl, the honorary secretary of the association; by a deputation from the meeting of Oct. 18; and by Messrs. Harper and Burn, of the Jerusalem Coffee House, on whose premises it was intended the association should meet in future, when a conversation ensued, from which it appeared that the association did meet the views of the gentlemen who had convened the meeting of Oct. 18, and that they would accordingly join it. The only objection appeared to be the third rule of the association, by which the annual subscription of 2*s.* 2*s.* was made payable in advance, from or on June 1, without reference to the period of the year at which the member might have joined. This rule it was suggested, and apparently understood, should be modified by the association, and the meeting then broke up, without passing any formal resolution, except a complimentary vote of thanks to the Chairman.

HARBOUR OF REFUGE.—The Royal Commissioners visited Rurwick Bay, near Whitby, on their way from Redcar to Whitby. The commission was formally opened in St. Hilda's Hall, when evidence was taken in favour of Whitby as a harbour of refuge. On the following day, Admiral Hope, the Chairman, called upon Dr. Merryweather, who stated in the following terms the claims of Rurwick Bay as a harbour of refuge.—1. The great advantages offered by nature, which could not be similarly constructed by art for less than ten millions sterling; also its natural conformation as a harbour.—2. The immense quantity of freestone, of the most durable character, which is close at hand, at the end of each breakwater.—3. That the breakwater could be constructed in a comparatively short space of time, and almost giving instant security to shipping, and thus saving life and property without much delay.—4. That the comparatively small amount of money which would be required would be insignificant, contrasted with the lives and property that would be saved.—5. That it would greatly increase the number of fishermen, and thus form a nursery for seamen; consequently be a great benefit to the nation.

* * * With last week's Journal we give a SUPPLEMENTAL SHEET, which contains a very interesting Essay on the Value of Mines in Cardiganshire, with a series of mining reports from the agents, over 150 years old; and the second part of Notes on Mining and Metals.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, Nov. 19, 1858.

COPPER.	£	s.	d.	BRASS.	
				Per lb.	Per ton.
Copper wire	1	1	12	1 1	10 <i>s.</i> 1 <i>s.</i> 1 <i>d.</i>
ditto tubes	1	1	12	1 1	10 <i>s.</i> 1 <i>s.</i> 1 <i>d.</i>
Sheathing & bolts	0	0	11	—	—
Bottoms	0	0	11½	1 0	—
Old (Exchange)	0	0	5½	—	—
Best selected	101	0	0	—	—
Tough cake	98	0	0	—	—
Tile	98	0	0	—	—
South American	98	0	0	—	—
IRON.	£	s.	d.	Per Ton.	SPelter.
Bars, Welsh, in London	7	5	0	—	Foreign
Ditto, to arrive	6	15	0	7 0 0	To arrive
Nail rods	7	10	0		

In the COAL MARKET, owing to the prevalence of easterly winds, there has been but a scanty supply of coals during the week, and a slight advance has taken place, the prices being—For best qualities, 19s. 6d. to 20s.; 17s. 6d. to 18s. 6d.; manufacturers', 18s. to 19s.; Hartley's, 18s. to 17s. 6d. The numbers of ships at market on Monday were 69; sold, 39. On Wednesday a further advance of 6d. took place; ships at market, 23; sold, 14. Yesterday there was but a very small supply, only 15 ships being at market, the whole of which were sold. The closing prices were—Best, 20s.; seconds, 17s. 6d. to 19s.; manufacturers', 17s.; steam, 21s.

In SALTPETRE, during the past week, a brisk trade has been doing, more especially for common qualities, the prices obtained for the most part being an advance upon last week's quotation. We note sales of 2897 bags of Bengal, 11*1*/₂ per cent. refraction, 40s. 6d.; 8*1*/₂ per cent. refraction, 41s. 6d.; 5 per cent. refraction, 43s.; 6 per cent. refraction, 42s. 6d.; 3*1*/₂ to 4*1*/₂ per cent. refraction, 43s. 6d. Also 255 bags of Bombay, refraction 3*1*/₂ to 32 per cent., 32s. 6d. During the week 121 tons have been landed, and 180 tons delivered, leaving the stock on hand 3015 tons, against 6710 tons at the same time last year.

The little flashes of excitement which burst out now and then, and lead us to expect a reaction that shall last, and break up the dull monotony that has so long continued in the general as well as in the MINING MARKET, have not yet led to the results we have looked for. Business to a certain extent is doing, and enquiries are made almost daily for mining investments as well as for mere speculations, but not, on the whole, to the amount that we might reasonably, looking to the abundance of money and good price of metals, have expected by this time. Great complaints are also made of the absence of business in other securities on the Stock Exchange, which is so far consoling, inasmuch as it shows that mines have at least their fair proportion of attention. Lady Bertha advanced from 22s. to 32s., but leave off at 29s. to 31s. East Russell advanced to 7*1*/₂ or 1*1*/₂ per share, since our last, and after a large business leave off at 7*1*/₂ to 7*1*/₂; Homersham's shaft has been holed to the 88, and driving will be commenced on Monday. West Frances, 14 to 15. South Frances, 240 to 250; the new lode has been valued at 7*1*/₂ per fm., and considered of great importance to the mine. North Frances have been in fair demand at 6*1*/₂ to 6*1*/₂. Craddock Moor shares have advanced to 28, in the face of stopping the dividends; at the meeting, the accounts showed a profit on the two months' working of 31*1*/₂ 19s. 11*1*/₂, and a balance in hand of 69*1*/₂ 15s. 3d.; the next sale of ore is expected to be 217 tons. Gonamena, 8 to 9; at the meeting, the accounts showed 13*1*/₂ 18s. 3d. in hand, and 90 tons of ore sampled. West Caradon, 11*1*/₂ to 12*1*/₂; South Caradon, 400 to 410; Wheat Mary Ann, 46 to 46*1*/₂. Ludcott shares have been in good request, and advanced to 2*1*/₂. In Pendine very large purchases have been made, and price advanced to 3*1*/₂; the mine, we understand, has been thoroughly inspected, and the report of a satisfactory character; this system of having mines inspected by independent agents, which we have so long advocated, is getting much into fashion, and will do good, and inspire more confidence in mining pursuits. Herdfoot, 6*1*/₂ to 6*1*/₂, and more enquired for; Pedm-an-drea, 15s. to 17s.; North Downs, 2*1*/₂ to 2*1*/₂. Redmoor, 4s. 6d. to 5s. 6d.; the returns of lead for the last two months, Oct. and Nov., will realise nearly 400*1*/₂, and 50 tons of copper in course of dressing; but the Kelly Bray copper lode this week is not looking so well as it did in the stopes. Kelly Bray shares have advanced from 31*1*/₂ 32s. 6d. to 2*1*/₂, owing to the cutting of the lode in the eastern part of the mine. Wheal Margaret, 62*1*/₂ to 65; Providence Mines, 60 to 62*1*/₂; Rosewarne and Herland, 5*1*/₂ to 6*1*/₂; Rosewarne, 30 to 32*1*/₂, and flat. Great Hews, 8 to 8*1*/₂; the mine is looking better generally, and expected to make a profit of 20*1*/₂ 200*1*/₂ this month. Great South Tolgas, 13*1*/₂ to 14; South Tolgas, 77*1*/₂ to 82*1*/₂; East Tolgas, 57*1*/₂ to 60; Wheal Wrey, 1*1*/₂ to 2; Wheal Crebore, 1 to 1*1*/₂; Tolcarne, 11s. to 12s.; Vale of Towy, 8 to 1*1*/₂; Great Alfred, 2*1*/₂ to 3; Alfred Consols, 7 to 7*1*/₂; North Minera, 5*1*/₂ to 6; West Seton, 290 to 300; Wheal Edward, 2*1*/₂ to 2*1*/₂; Great Wheal Vor, 8 to 1*1*/₂; Condurrow, 45 to 55; North Bassett, 7 to 7*1*/₂; West Bassett, 22 to 23; Par Consols, 16*1*/₂ to 17*1*/₂; East Carn Brea, 5*1*/₂ to 6; South Carn Brea, 2*1*/₂ to 3; Kitty (Lelant), 8 to 9. East Bassett shares have been firmer, and more enquired for, at 100 to 102*1*/₂; the 135 tons of copper ore sampled on Thursday is calculated to yield 13*1*/₂ 30*1*/₂, or an average of nearly 10*1*/₂ per ton; and 230*1*/₂ of the having been sold for the same two months, a profit of nearly 600*1*/₂ is made; the lode in the 80 is not yet cut. Carn Brea are flatter, at 60 to 62*1*/₂; the mine, however, continues to look well in Burncoose. Tehidy, 8 to 1*1*/₂; these shares have been long flat and neglected, but a good improvement has taken place, and the High-burrow lode daily expected to be cut, so that a short time may see the mine in a much better position. Wheal Trelawny have been largely dealt in at 26 to 26*1*/₂; Trewetha, 10s. to 12s. 6d.; Wheal Grenville, 2*1*/₂ to 2*1*/₂ 6d.; East Trefusis, 2*1*/₂; Tincroft, 3*1*/₂ to 3*1*/₂; North Dolcoath, 4*1*/₂ to 4*1*/₂; Wheal Buller, 17*1*/₂ to 18*1*/₂; North Crofty, 2*1*/₂ to 3*1*/₂; North Roscarrock, 18 to 19; South Condurrow, 3*1*/₂ to 3*1*/₂; Marke Valley, 2*1*/₂ to 2*1*/₂, and more enquired for. West Par, 13s. to 15s.; Wheal Uny have declined to 10, sellers; the copper lode lately cut does not look so well in the 50, but may improve going east, as it gets under the bunch gone over in the 40. Devon Great Consols, 460; the lode in Agnes' shaft has materially improved, being 5 feet wide, and worth 12 tons per fm. Cwmystwith, 250 to 300; East Daren, 105; Old Tolgas, 30.

At Truro Ticketing, on Thursday, 4486 tons of ore were sold, realising 23,828*1*/₂ 18s. 6d. The particulars of the sale were—Average standard, 13*1*/₂ 14s.; average produce, 6; average price, 5*1*/₂ 6s. 6d.; quantity of fine copper, 268 tons 10 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
Oct. 21	4245	£128 17	6 <i>1</i> / ₂	£5 11 4	£26 5
28	2667	129 2	7	6 6 0	89 16
Nov. 4	3487	128 16	7 <i>1</i> / ₂	6 12 0	91 2
11	3704	133 1	6 <i>1</i> / ₂	5 15 0	90 1
18	4486	134 14	6	5 6 6	88 15

Compared with last week's sale, the advance has been in the standard 1*1*/₂ 6s. 6d., and in the price per ton of ore 1*1*/₂ 8s. Compared with the corresponding sale of last month, the advance has been in the standard 4*1*/₂ 2s., and in the price per ton of ore 5*1*/₂ 2d.

At Wheal Buller meeting, on Tuesday, the accounts showed—Balance last audit, 17*1*/₂ 2s. 2d.; copper ore and tinstuff sold (deducting 22*1*/₂ 15s. 11*1*/₂ d.) 34*1*/₂ 18s. 6d.; copper lode for crushing ore, old iron sold, and sundries, 11*1*/₂ 18s. 7d.; on account of tin, to be returned, 40*1*/₂ 5*1*/₂ 6s. 5*1*/₂ d.; mine cost, Sept., 11*1*/₂ 18s. 8d.; October, 10*1*/₂ 18s. 15*1*/₂ d.; merchants' bills, 61*1*/₂ 19s. 7d.; income tax, 50*1*/₂ 10*1*/₂ d.; leaving balance in favour of mine, 27*1*/₂ 17*1*/₂ 2d. The profit on the two months' working was 10*1*/₂ 12s. A dividend of 12*1*/₂ 5*1*/₂ d. per share was declared, and 14*1*/₂ 17*1*/₂ 2d. carried to credit of next account.

At Levant Mine meeting, on Tuesday, the accounts showed a balance in favour of mine, 18*1*/₂ 14s. 2d. A dividend of 2*1*/₂ and bonus of 3*1*/₂ (80*1*/₂%) was declared, and 10*1*/₂ 14s. 2d. carried to credit of next account.

At the South Garras Mine meeting, on Tuesday, the accounts showed—Balance last audit, 7*1*/₂ 6s. 6d.; ore sold, 21*1*/₂ 2s. 2*1*/₂ 2d.; mine cost, July to July, 11*1*/₂ 18s. 6d.; merchants' bills, 57*1*/₂ 18s. 1d.; dues, 12*1*/₂ 18s. 3d.; leaving balance in favour of mine, 25*1*/₂ 17*1*/₂ 2d. A dividend of 5*1*/₂ (2*1*/₂ per share) was declared. Capt. W. Burrows and R. Tyzzer reported that the 50, north of engine-shaft, was driven about 42 fms.; Gregory's stope, in back of this level, were worth 1 ton per fathom. Ball's stope, in back of the 40, were worth 2 tons per fathom.

At the Wheal Bal meeting, on Nov. 9, the accounts showed—Balance last audit, 31*1*/₂ 15s. 10*1*/₂ d.; arrays of call, 5*1*/₂ 6s.; tin sold, 93*1*/₂ 16s. 6*1*/₂ d.; dues, 12*1*/₂ 18s. 3d.; leaving credit balance, 10*1*/₂ 12s. 2*1*/₂ d. The profit on the two months' working was 10*1*/₂ 12s. A dividend of 12*1*/₂ 5*1*/₂ d. per share was declared, and 14*1*/₂ 17*1*/₂ 2d. carried to credit of next account.

At the South Garras Mine meeting, on Nov. 12, the accounts showed—Balance last audit, 7*1*/₂ 6s. 6d.; ore sold, 21*1*/₂ 2s. 2*1*/₂ 2d.; mine cost, July to July, 11*1*/₂ 18s. 6d.; merchants' bills, 57*1*/₂ 18s. 1d.; dues, 12*1*/₂ 18s. 3d.; leaving balance in favour of mine, 25*1*/₂ 17*1*/₂ 2d. A dividend of 5*1*/₂ (2*1*/₂ per share) was declared. Capt. W. Burrows and R. Tyzzer reported that the 50, north of engine-shaft, was driven about 42 fms.; Gregory's stope, in back of this level, were worth 1 ton per fathom. Ball's stope, in back of the 40, were worth 2 tons per fathom.

At the Craddock Moor Mine meeting, on Nov. 10, the accounts showed—Balance last audit, 9*1*/₂ 9s. 5*1*/₂ d.; merchants' bills, 36*1*/₂ 17s. 11*1*/₂ d.; tin, 1*1*/₂ 6s. 5*1*/₂ d.; dues, 12*1*/₂ 18s. 3d.; leaving credit balance, 10*1*/₂ 12s. 2*1*/₂ d. The report was very encouraging. Messrs. Field, Mackay, Richards, Northen, and P. Watson, were elected a committee of management.

At South Dolcoath and Carnarthen Consols meeting, on Nov. 11, the accounts showed—Balance last audit, 6*1*/₂ 3s. 1d.; mine cost, merchants' bills, &c., 14*1*/₂ 10s. 2*1*/₂ d.; leaving balance in favour of mine, 16*1*/₂ 18s. 3*1*/₂ d. The report was very encouraging. Messrs. Field, Mackay, Richards, Northen, and P. Watson, were elected a committee of management.

At Kelly Bray Mine meeting, on Thursday (Mr. P. Watson in the chair), the accounts showed—Balance last audit, 15*1*/₂ 18s. 7d.; sales of ore, 16*1*/₂ 19s. 5*1*/₂ d.; mine cost, 16*1*/₂ 18s. 6d.; sundries, 6*1*/₂ 19s. 5*1*/₂ d.; ore sold, 24*1*/₂ 17*1*/₂ 1d.; miners' cost, 17*1*/₂ 18s. 7d.; tin, 1*1*/₂ 6s. 5*1*/₂ d.; dues, 12*1*/₂ 18s. 3d.; leaving credit balance, 10*1*/₂ 12s. 2*1*/₂ d. The report was very encouraging. Messrs. Field, Mackay, Richards, Northen, and P. Watson, were elected a committee of management.

At the Gonamena Mine meeting, on Nov. 10, the accounts showed—Balance last audit, 15*1*/₂ 18s. 7d.; sales of ore, 16*1*/₂ 19s. 5*1*/₂ d.; mine cost, 16*1*/₂ 18s. 6d.; sundries, 6*1*/₂ 19s. 5*1*/₂ d.; ore sold, 24*1*/₂ 17*1*/₂ 1d.; miners' cost, 17*1*/₂ 18s. 7d.; tin, 1*1*/₂ 6s. 5*1*/₂ d.; dues, 12*1*/₂ 18s. 3d.; leaving credit balance, 10*1*/₂ 12s. 2*1*/₂ d. The report was very encouraging. Messrs. Field, Mackay, Richards, Northen, and P. Watson, were elected a committee of management.

At the Cobalt Mine meeting, on Nov. 10, the accounts showed—Balance last audit, 15*1*/₂ 18s. 7d.; sales of ore, 16*1*/₂ 19s. 5*1*/₂ d.; mine cost, 16*1*/₂ 18s. 6d.; sundries, 6*1*/₂ 19s. 5*1*/₂ d.; ore sold, 24*1*/₂ 17*1*/₂ 1d.; miners' cost, 17*1*/₂ 18s. 7d.; tin, 1*1*/₂ 6s. 5*1*/₂ d.; dues, 12*1*/₂ 18s. 3d.; leaving credit balance, 10*1*/₂ 12s. 2*1*/₂ d. The report was very encouraging. Messrs. Field, Mackay, Richards, Northen, and P. Watson, were elected a committee of management.

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Notices to Correspondents.

* Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly fled on receipt: it then forms an accumulating useful work of reference.

MINING COLLEGE.—As such highly favourable results are anticipated from the establishment of a Mining College at Newcastle, I presume that the fees will be extremely low, so as to enable every industrious overman to send his son there; otherwise I think the failure will be as complete as in Cornwall. Throughout my experience I have found that those who can afford to pay for collegiate instruction do not make the best miners; yet all that has hitherto been proposed for working men has been quite above their reach in a financial point of view. Let something really good and cheap, like the Bristol School, be introduced into Cornwall and the North, and we may then expect good results.—MINER: *Truro*.

ARSENIC.—Can any of your correspondents inform me if there is any sale for arsenic collected from tin burning-house fumes? and if there is, also furnish me with the names of purchasers?—MINER: *Ashford*, Nov. 10.

REDUCTION OF POOR COPPER ORES.—T. S. (Minden).—So far as we can ascertain, there was no substantial difference in the several processes for reducing poor copper ores, which excited so much attention some short time since; the various inventors—Burhill, Wagstaffe and Perkins, Godfrey, Reid, O'Neill, and others, all employed an alkali as their flux; and the processes were so nearly alike, that if one were attributed to another patentee, we question whether the patentee himself would know that it was not the process he had claimed, although, when the specifications are side by side, it appears that they are not very similar copies of each other.

QUARTZ REDUCTION COMPANY.—Some time since, I drew attention to the fact that the directors had stated they could not decide upon accepting the offer of Mr. Squire to reduce the gold in the quartz belonging to this company until Oct. 6. This period has long since elapsed: are we now to suppose that the process of Mr. Squire is a failure, or that the Chairman, despite his conviction uttered so publicly at the meeting, doubts the efficacy of the operation? It appears to me that this vacillating course of proceeding is one which must be considered not only highly detrimental to our interests, but likewise a great injustice to Mr. Squire, who has been led to believe that his invention, or *modus operandi*, could be practically tested on the ores of this company. Many of the shareholders, who have been wearied by the tedious delays, and the fruitless and frivolous excuses that from time to time have been put forward, wish to see the matter settled at once. I would enquire if Prof. Ansted, who at one time was a director, and from whom so much was expected, has been consulted as to the probability of the process? The directors had better inform the shareholders at once whether they are going to give Mr. Squire a fair trial. Our shares are at present valueless: they cannot be worse. They may, if there be any truth in what is affirmed, by this manipulation become of some worth. Under all circumstances, the termination of suspense, either for good or evil, is a consummation devoutly to be wished.—CITRUS.

IRON SHIP-BUILDING.—During the last week, owing to the heavy gales of wind, many vessels have been lost off the coast, and we may expect to hear of still further accidents occurring to vessels, whether constructed of wood or iron; it appears that the majority of these are not even secure, sea-worthy, or fire-proof. Several improvements have been proposed, but none of these have ever attained the desideratum required. Mr. John Clare, Jun., of Liverpool, for a considerable period has been before the public, and has shown great perseverance in enunciating his views, and it does seem strange to me, that in so wealthy a seaport as Liverpool he has found no co-operation. I do not pretend to judge of his capabilities, nor will I hazard an opinion as to the soundness of his theory; surely there must be in the important borough where he resides men of practical knowledge, who can arrive at a correct decision as to his merits. Should the propositions he so constantly is mooted be found visionary, palpably erroneous, or the concoction of an erratic brain, their fallacy should be immediately exposed, and Mr. Clare's powerful energies devoted to some subject which might receive a practical solution, and be of some utility to the community at large. Under all circumstances, I think it but justice to him that he should have his views in some measure tested. By no means agree that, on the authority of his dictum, and the great faith he has in his own abilities, the money should be advanced to him to build a vessel larger than the *Great Eastern*. These extravagant notions, in my opinion, have been the main cause why he has not been listened to, when, perhaps, he ought to have had some attention paid to what he proponed. There is an old saying, that "There is no chaff but that always some wheat may be picked out of it"; and I am convinced that, at least in some of the subjects broached by Mr. Clare, a little useful information could be gleaned. His principle could just as well be tried on a small vessel as a Leviathan, and there ought to be public spirit enough among the shipping interest to award him a trial. Much was said some time since about the efficacy of the new floating batteries; I know not who was the inventor of these machines, but I perceive that on trial they have been found to be useless, and thus that question is definitively solved. I do not wish to encourage every inventor. They are all more or less self-optimists, vain of their abilities, and proud of their concoctions; but still, whenever the subject they bring forward is one of national importance, I think that, for the interests of the public, they ought to have a committee of investigation, that would be able to judge whether they were charlatans, eccentric madmen, ignorant pretenders, mistaken theorists, or persons who were capable, by their abilities and genius, of becoming benefactors to the whole human family.—MECHANIC: *B.M.*

THE STOCK EXCHANGE OFFICIAL LIST.—Will you afford me space in your valuable Journal to draw attention to a certain clique, who profess to give the "Closing Prices" of the Mining Shares in the Stock Exchange Official List? Those who are intimately acquainted with the Mining Market need not be told how false in several cases these quotations are; but there are many who look to the official Stock Exchange List as a faithful guide. Let those parties understand that the Stock Exchange Jobbers have constantly no business to do at the quotations in the List, and that the price of a share may remain unaltered for weeks, notwithstanding its fluctuations up or down, as the case may be. I trust that before long this matter may be brought under the notice of the Committee of the Stock Exchange.—INVESTIGATOR.

THE DOWNS OR DIVING-ROD.—Having a little book in the press, which will be published by Messrs. Longman and Co. in the course of a few days, under the title of "Chemical, Natural, and Physical Magic," I shall feel much pleasure to learn from your correspondent, Mr. George Herwood, some few explanations relating to the diving-rod, described by him in your Journal of Nov. 6. The shape, length, diameter? Must it be of any particular metal? Does it point always in one direction, according to the compass? He says—"I was induced to walk over a piece of ground that I had never before seen with the mysterious twig in hand, when to my utter surprise and consternation the rod did invert, nor could I by the most strenuous endeavour prevent it." In what manner did the rod invert? and am I to understand that Mr. Herwood used his most determined physical powers to prevent the rod from acting? Lastly, how is the rod suspended—if it be suspended? or is it held in the hands of the dowser? I am only prompted to ask these questions by a desire to sift facts from fiction, in which I believe all your readers are as interested as Sir.—SEPTIMUS PISSON: 2, New Bond-street, W., Nov. 16.

RAILWAY STATISTICS.—The figures which appeared in last week's Journal were from the *Times* of Nov. 6, and not those set down as totals in Capt. Galton's report, but are the correct totals, which were prepared by Mr. John Grinstead. It is important that the amount of capital authorised to be raised should be clearly known; it will be found that on lines open and unopen it is £37,051,734!, according to Mr. Lowe's return. Capt. Galton's return does not give the total amount of capital authorised, but only the amount on lines open, which, according to Capt. Galton's report, is £40,072,882!: but in the *Times* of Nov. 6 the details are copied *verbatim*, and the total is shown to be £45,377,494!, from which it is obvious that the errors in addition in pages 54 to 60 of Capt. Galton's report amount to £5,304,602!

"T. S. (Lincoln).—The company has been dissolved for nearly three years. Mr. Fred. Dineley, of Austinfriars, was the last secretary. We have never seen a report from Mr. Waddell, who was specially dispatched to California for the purpose of investigating the affairs of the company in that country.

TREBURGETT AND PENGENA MINES.—There seems to be great difference of opinion about the value of these properties, though I have not yet seen the views theron of any of the acknowledged sound practical authorities. With regard to Treburgett, the only question at present appears to be whether it was a rich mine, and paid dividends; and so if, to what extent? Allow me to suggest that Mr. Eborac should produce the books, and show the facts, which, from his connection with the concern when it was at work, he can doubtlessly do.—W. T. : St. Asstell, Nov. 17.

WHEAL ENNA, AND BROOKWOOD.—As a shareholder in Wheal Emma, I agree with Mr. Eborac that it would be the height of folly to unite with Brookwood, after so patiently spending our time and money in bringing Wheal Emma to that interesting point, to all shareholders, when the receipts exceed the expenditure by 200% for the month, for the first time since it has started. I do not think it likely that the shareholders will agree to such a proposition. I have great hopes of Wheal Emma, and have no doubt that it will be as fine a property as any in the county. The greatest difficulties are now got over, and the 5s. reached, and, if I mistake not, we shall see great things. I say, with Mr. N. Eborac, that I am content, and hope to hold my property in Wheal Emma independent of Brookwood.—OLD SUBSCRIBER: *London*, Nov. 15.

MINING CALLS AND MINING LABOUR.—In my travels through the country a few days since, I passed by one of the oldest mines in Cornwall, which is now in liquidation. The whole place bore the appearance of desolation; the machinery had been all sold, and the workmen discharged. I wondered why they still lingered around this scene of ruin. I was informed that the men were waiting for the arrears of pay due to them, some of them having as much as three months owing to them. On my enquiring the cause of this from the resident agent, he told me that the mine had never had fair play, as the gentlemen adventurers had scarcely ever paid their calls properly; the money had been advanced by the purser as long as he had the means; failing this, he had pledged his credit, and now was in difficulties, owing to advances he had paid on account of the shareholders for labour. I was subsequently informed that among the defaulters were several clergymen of the Church of England. I will make no further comment upon the subject, but I must state the system is most pernicious. When the miner is robbed of the reward of his labour, as appears to have been the case in this instance, and several others I could mention, persons should not complain of the injustice of the working man, when they have so fearful an example of bad faith in their employers.—JUSTITIA.

PREVENTING THE INCURSTATION OF STEAM-BOILERS.—D. A. (Paris).—We some time described the patent referred to. It was taken by M. Eugène Coulson, of Croisot, near Rouen. It consists in employing the plumbates and plumbates of potash and soda, the insoluble salts of lead, and chloride of zinc. He proposed likewise to add to the substance employed sand, clay, red ochre, and muriatic acid.

THWARKHALE MINING COMPANY.—I have read lately several reports of this mine from various quarters, all speaking most favourably of the prospects of the mine, if fairly opened. We were told, about eight months since, when the Hon. Wm. Napier was in the district, that in a short period the mine would again be set to work. There seems, however, to be some mystery attached to all the proceedings connected with the re-working of the mine. First, we were informed that some noblemen had some of their friends fallen into difficulties, and, consequently, a suspension of operations would be temporally necessary until affairs were arranged. In the meantime, one of the most promising properties, according to all received opinions, is now idle. This is deeply to be regretted, as many persons were drawn from other parts of the country, and left situations which offered a promise of a permanency there, in order to settle in this district, which was brought before them under such favourable auspices.—T. B. L.

"F. L. (Manchester).—The Western Mining Company of Western Australia, which held its annual meeting in Perth about the middle of July, are the proprietors of a copper mine. The Geraldine Mining Company are in no way connected with these gentlemen, who are only developing at present a large lead mine; it is, however, we believe, their intention, as circumstances appear favourable, to open up several of the more promising of the other veins in their possession.

NEW JIGGING MACHINE.—A correspondent, I perceive, requests as full a description of my improved jiggling machine as Capt. Sylvester has given of his. I see he dates his letter from Chacewater; had he made enquiry at that village he could have seen the model; or, if he really wishes to see the plan, by taking a walk or ride as far as Vivian's foundry, at Tucking Mill, he may see it, and work it for himself. Had he been an attentive reader of the *Mining Journal*, he would have found an elaborate description of the machine in a letter addressed to the Editor some weeks since.—GEORGE HERWOOD.

WHEEL TRELAWNY.—Knowing you are a great lover of economy, both in progressive and dividend mines, I would respectfully solicit your attention to one of the latter, in order that you may point out a remedy, or say where the fault, if any, rests. The mine I allude to is Trelawny. I was informed by a London broker in December last that the labour cost was reduced 20 per cent., and we all know materials of every kind are reduced from 15 to 20 per cent. since the peace. I am constrained to make these remarks from comparing the working cost for the three months ending Aug. last with nine months' cost in the year 1854, when materials, labour, &c., were at the highest point:—Working cost three months ending Aug. 1854, 3782, 18s. 4d.; ditto, Aug. 1854, 4072, 1s. 4d.; ditto, Nov. 1854, 4250, 0s. 5d.; ditto, Aug. 1858, 5269, 10s. From the amount of ore sold the three months prior to the last meeting, say 6096, 11s. 5d., and a large balance of 1848, 1s. 8d., 7380, 13s. 1d., it does appear that, had strict economy been exercised, there should have been a dividend of at least 11. 10s. per share declared at the last meeting. Any information on the matter will much oblige.—A CONSTANT READER: *Ireland*, Nov. 15.

Mining in WALES.—In the interesting account published last week in the *Mining Journal* of Sir Caribury Price's mines, one interesting historical fact is omitted—that Mr. Thomas Bushell, who held these mines previously, raised large quantities of silver from them. He was a zealous royalist, and a great sufferer for the cause of Charles I. Some of the silver for the use of that unfortunate and misguided monarch was minted at Aberystwyth into shillings. These bear on them the impress of the Prince of Wales's plume. Several of these curious coins are now in existence, and, among other places, can be seen at the British Museum.—CAMBRIAN.

PRACTICAL SURVEYING.—"A Young Miner."—The best work on practical surveying is, probably, the *General Text-Book*, published by Mr. John Weale, of High Holborn. It comprises treatises on arithmetic, plane and solid geometry, mensuration, trigonometry, conic sections, land measuring, land surveying, levelling, plotting, railway and colonial surveying, and much other valuable information. If "Young Miner" puts a more definite question, we might give him a more definite answer.

WEST BASSET & SOUTH FRANCE.—The notice in your last Journal of a *rule nisi* having been obtained in the Queen's Bench for a new trial, reminds me of the dispute between the parties, and of the behaviour of a clerk to one of the legal firms engaged for South France. At the last March Assizes I was subpoenaed to give evidence on behalf of West Bassett. Plaintiff's solicitors having learned that I had surveyed West Bassett sett, and that I had taken a copy of the plan of South France's sett, which plan was kept at the account-house, and that both plans gave the line as claimed by the plaintiff's, required me to prove those facts, which I was prepared to do, but was not called upon to do them, because no evidence at all was adduced on plaintiff's behalf on that occasion. After the case was concluded, and the verdict given on *ex parte* evidence, I met the clerk in question in Bodmin, when he began upbraiding me for lending myself to produce a plan which I had taken from that at South France's account-house, through the kind permission of the agents. I told him that I had been suspended, and was compelled, therefore, to attend. He said that I ought not to have informed plaintiff's solicitors of my having such a plan; and, in conclusion, said that his party would do all in their power to keep me out of employment in Cornwall. Now, I beg to state that if the agents at South France had declined the permission, I could have taken a tracing elsewhere of a copy of the same plan, which would have served my purpose quite as well. My purpose was to embody its contents in the "Plan of Camborne and Illogan Mining District." I find that a false impression has been made by the statements of the said clerk and his party in reference to this matter: many persons having been led to believe that I went to South France and deceitfully obtained the copy, with a view to assist West Bassett. When I state the fact that I made the copy in Feb. 1849, it will be manifest that I had no such design in my head, for at that time no dispute had arisen between the parties. Plaintiff's then had the ground now claimed, and defendants, by drawing the line to the south-east corner of Vincent's house, giving the same to West Bassett, did not dispute it. It seems odd that the clerk of a legal firm should accuse me of doing wrong in accepting employment from the opposite party. It is well known that the gentlemen of that profession will render their services to any person who will pay for them; and if the masters of the aforesaid clerk (and very respectable they are) had been retained by West Bassett, doubtless the seal manifested by him would have been used on that side. In that case how much pleased they would have been to avail themselves of my assistance? I should then have been a good man, whereas in their estimation I am now a very bad one.—R. SYMONS: *Truro*.

WHEAL KITTY (St. Agnes).—Two errors occurred in my report, inserted last week, which I should feel obliged if you would correct. The one respecting the 82 fm. level, west of the engine-shaft, should read—"We have intersected the large cross-course in the 82 west; this has heaved the lode about 25 fms. We shall now (not "how," as printed) drive on its course until we reach the lode (on "not in" the) western side of it, when we expect to LEAVE DOWN THE WATER, and drain the lode below Holgate's shaft," and not "heave down the shaft," as inserted.—M. EDWARDES

to solicit the aid of the Government, and for the purpose of inducing a protective policy. However, the error is theirs. This, then, is the vitiating influence of restrictive commercial laws proved in contradiction, while even a partial relaxation of the tariff, which caused the French machine-makers to purchase the raw material in the best foreign markets, gave an impetus to that branch of trade most directly involved in neighbouring competition, by which the exports were increased by seven or eight millions of francs. With regard to the comparison instituted between British and French wrought-iron, no experience has long settled the question; but, at the same time, it is satisfactory to refer to official reports on the superiority of the former. Tredegar Works, South Wales, from which 11,000 tons of the English iron forming the Northern line (France), occupy a very prominent position in the opinion of foreign railway contractors, and of the Government, from the fact that the report of the engineers of the *ponts et chaussées*, a minutely and carefully inspected that part of the line laid with the English rails, and which is subjected to the heaviest traffic of the country, shows that after three years' wear and tear, no little more, than 1 per cent. of rail requiring renewal can be detected. Nor is this the only case of the exceeding power in our national iron facture. The Government engineers from the Brest Dockyard report—"The simple cutting of a few bars, and bending one of them, were sufficient to prove the superiority of the English iron from Bowring over all the rolled iron employed in the *ponts et chaussées*."

Further, after citing the power of resistance of the iron from the French employed in the yard, they go on to state—"The Bowring iron, in respect to its tenacity as well as its malleability, is infinitely superior—in many respects to all that has hitherto been seen in the workshops and forges of Brest, and its employment would be very advantageous." The marine engineers at Toulon and the port of Lorient also bear testimony to the superior qualities of the Bowring iron. The latter, in his report to the Maritime Prefect, says—"The iron easily supported, even exceeded, the proofs customary in the Navy for best iron," and is superior in quality to the best iron (French) employed for naval purposes." Such evidence is too convincing, and no doubt the French Government, earnest in its efforts to establish the prosperity of the country, will, in furtherance of such a policy, speedily modify the present tariff, or sweep away altogether those barriers that now exist against free commercial intercourse.

Among the nations with whose metallurgical manufactures and commerce our geographical position and general policy would tend to unite us closely, stand forth in the first rank Belgium and Prussia; the latter, great mineral resources, but very inadequate manufactures, the former, both resources and a spirit of industry which within a very few years raised it to a first-class position in the iron and metal trade. And here we may remark with regard to Prussia, a country with which we are now more than ever socially connected, no act under free trade can make her a prosperous manufacturing country. The organisation of large foreign associations for the development of her resources is looked upon with a kind of irrational jealousy, and subjected to a surveillance that never fails to retard action and progress.

In 1851 raw iron produced in Prussia from 227 high furnaces, of which were in the Rhenish districts, reached 6,083,398 centners, a *centner* being something more than one hundredweight. The Rhenish provinces add to this aggregate 2,187,697 centners, an amount which may be seen to have somewhat increased, for Rhenish industry has become a German household word. Nevertheless, as it is reported, a computation has been made that Prussia will be brought to yield in a few years 100,000 centners, sufficient to more than supply the wants of the country, a more fostering system must be adopted than that which now encourages her enterprise and industry. Otherwise the requisite supply will be longer coming than her well-wishers would desire to anticipate. In Belgium, the iron trade is progressing under far more cheering auspices; its growth has been singularly rapid and prosperous. A single steam-engine at Liege, for mining purposes, represented her industry so far in 1835; and her operations on her mineral resources were carried on by no more than 340 workmen. Up to 1845, there was a struggle; her engines, at that period, being only three, and her miners about 400; however, from that period her operations increased, and in 1851 she numbered 40 steam-engines, of 1264 aggregate horse-power, and 4000 miners, in full work; while the capital employed in mining had increased from 200,000 frs. to over 4,000,000 frs. The value of the produce, also, mounted in 1851 to 4,000,000 frs., in contradistinction to that of 1835, which was estimated at little more than 400,000 frs. This valuation relates only to the province of Liege. The returns include all the minerals, and it would require a reduction of one-sixth to correctly apply it to the exclusive produce of iron mines. In the above periods there has been an increase of 38 per cent. on the amount of iron ore washed in Belgium—60,000 tons being now the estimate. In 1856, the iron-smelting furnaces in operation were 73, 20 of which still used wood fuel; these, however, but a small produce, and are confined to the provinces of Luxembourg and Namur.

The entire iron trade of Belgium, according to the estimate of 1856, employed 12,847 workmen. Hainault and Liege absorbing of this labour, respectively, 5490 and 588 hands; the value of their labour in the first, Hainault, reaching the estimate of 31,000,000 francs, and in Liege to 6000,000 francs. The application of improved machinery has been here very beneficially simplified; for whereas, in 1851, 8122 workmen produced only the sum of 31,350,000 frs.; in 1856 the labour of 12,847 workmen was estimated at the actual value of 32,622,096 francs. The then state of Europe did, it seems, give to some extent an augmented quotation for produce and manufactures; but, at the same time, there remains a sufficient margin to assure the progress of vast improvement.

The trade in nails with the Netherlands, Northern Germany, and Turkey, the United States and Brazil, is upon an extensive scale, such exports amounting to above 8,000,000 frs. About 500,000 kilogrammes are exported to Great Britain; such constituting a principal export of iron to that destination. The exportation of *armes de guerre* and *de luxe* is upon an extensive scale; her trade in *armes de guerre* with Great Britain alone in 1856 having reached the great sum of 2,398,000 frs. The report on Switzerland shows the people of that country to be, if not actually piratical in the model department, very close imitators and copyists of all that is excellent in our most approved machinery; and they are slow in securing English mechanics to superintend their operations. Sicilia enters upon her labours in iron manufacture with that zeal and perseverance which characterise her in social and commercial progress, and she will, no doubt, by-and-by develop her resources for the benefit of her people. But, summing up the evidence so ably collated in the reports laid before the Government, and arraying, as it were, the energies of the continental nations, so far as the iron trade is concerned, we see nothing calculated to awaken amongst the most timid any apprehension that this combined influence can ever materially affect our commercial interests. The genius of the British people is enterprising and inventive, prompt to action, we construct and use while others are deliberating on the possibility; and with capital at call, and a free scope for our projects, our nation can supersede us in manufactures and commerce.

In the MINING JOURNAL of November 6 we laid down a few brief rules for persons entering on mining speculation to observe, and stated our opinion, that were they honestly acted on British mining would be found a safe, lucrative, and legitimate business. The subject is one of so much importance that we again revert to it. The present is a period when too much caution cannot be exercised, and it is clearly our duty, whilst we zealously encourage genuine undertakings, to guard against anything like undue speculation. In the article alluded to we advanced sound reasons why mining must ere long occupy a position amongst the public securities of Great Britain of which it has been unworthily deprived for some years, from a variety of conflicting and adverse causes.

It is admitted as sound logic that paradox is one of the best methods of proof, and in our observations we shall avail ourselves of this consideration. We first recommend the intending investor to ask himself, or his advisers, "Is the mine in a favourable locality, and have the leases been ascertained to be productive?" This, though not the most important, is still a question of grave consideration; and often, sadly too often, has it been neglected. How many owing their losses, or even ruin, to what they term mining have overlooked this grand and necessary precaution, who pick up shares cheap, by advertisement or by persuasive sharedealers; but who, like picture amateurs picking up gems cheap, on experience and reflection find their "old masters" nothing but daubs, and varnished up rubbish. This is a true simile, and fairly represents the heedlessness with which valuable proper-

ties are treated, and worthless trash substituted for genuine investments. In the second question, extreme care is requisite, for there are in all quarters what are technically called merchants' mines—i.e., where tradesmen supply the mines with materials at their own prices, and send in such qualities as they choose. The poor agents, though knowing and feeling the evil, can only remain passive spectators of that they deplore, for fear of losing their situations, the merchants holding the majority of influence in the mine—the immense rates at which supplies are sometimes charged being more than sufficient to cover the amount of their calls, and even then yield a fair profit. The necessity for attending to the lord's dues is so apparent as to be of the highest consideration; for, as it is remembered, to him the dues are clear profit. The destruction of surface property, of whatever kind, is always mulcted at high rates. The chances of unlimited wealth to him without cost is great, therefore dues should be moderate.

The third question is of paramount consequence. How many who have embarked thoughtlessly into mining schemes have had reason to repent from this cause—having found themselves associated with persons who, instead of adventuring in mines, or pretending to be mine proprietors, had better become candidates for White Cross-street or Portugal-street. To their utter disgust they discover their errors, and in vain curse their own folly. That the confiding such large sums as mining of necessity requires to competent agents should be a subject of stern surveillance is self-evident.

We come now to a matter to which in our previous paper we called particular notice, and to that we again urge attention, as neglect of it causes not only ruin to the incautious, but to all with whom he is associated. No man should connect himself with mining adventure in a spirit of reckless speculation; it is nothing short of gambling or swindling, and as such should be regarded and punished. Those who practice it not only deceive themselves but others, and yet ascribe ruin, if it overtake them, to mining, which it is not, but infamously gross deception. The paradox is where the investor takes due precaution, and makes the necessary judicious enquiries, which we have endeavoured to describe as essential. He then has little cause to fear entering on mining to any extent his capital may warrant. It is to this conduct the millionaires of mining may fairly ascribe the vast wealth they have amassed, and not to any chance, wild speculation they may have been induced to join in under plausible pretences, or an overweening desire to obtain riches without due and necessary outlay and risk. We find men who have been rewarded in mining adventure studiously practising the principles we recommend, and when once entering on a project, pursuing it with assiduity and perseverance, and not with that vacillation so characteristic of those who rail at mining, many of whom leave the profession hastily from having joined it thoughtlessly; when the wise investor, by exercising his experience, invariably reaps the benefit.

British mining, we again proclaim, if conducted as mining should be, is one of the safest, most lucrative, and most legitimate of our home interests, and as such we commend it to capitalists.

We announced in our Journal of Nov. 6 that a bill would be introduced during the ensuing session of Parliament to amend the *JOINT-STOCK COMPANIES ACT*, having for its object the publication of Articles of Association when the same differed from Table B, and that the shareholders should have the privilege, at a meeting after the formation of the company, but before the funds were dealt with, of exercising the right of nominating the directors and other officers. We believe we were the first to point out the defects in the statute, and the necessity for the proposed amendments; and the announcement we recently made on the subject having been quoted generally by the press shows that some interest is felt in the question. We are not surprised at this; our only surprise is that the abuses which we pointed out as capable of being perpetrated should have escaped our legislators when passing the bill through committee. It strikes us that in their endeavour to avoid Scylla they have run into Charibis (or rather run the public there); for, great as the improvement is compared with the old law, which allowed A to be hunted to ruin for debts due to B, contracted by C, we certainly had a right to expect that, when with a view of putting an end to the then state of things, and the abuses existing under it were being taken cognizance of, with the intention of a remedy, some better enactment might have been provided than that which allows seven persons, on their subscribing 7*l.*, obtaining from the public not only 49,993*l.*, to make up their required capital of (say) 50,000*l.*, but having the control of it as self-elected directors for the period of 12 months, and that subject to the Articles of Association, framed by the seven, with a full knowledge of the advantages to be derived from the expenditure of such a capital; and yet virtually this is what can be accomplished under the *Joint-Stock Companies Act*, as it stands at present.

Under the old law, C had an implied authority to pledge the credit of A, until his ruin was accomplished. Under the new, he merely has the right to squander his money without control, and not pledge his credit; and this seems the "limited liability" which the law secures A, in consideration of depriving C of what we presume was deemed a vested right he had acquired to pledge A's credit to the extent of his last shilling. We have not met with any one who disputes our interpretation of the statute, or the necessity of the amendments we suggest. True, a Member of our Legislature, as to the proposed amendment requiring the self-elected directors to call a meeting of shareholders before the funds of the company are dealt with, has expressed a doubt whether the shareholder, having subscribed his money in the face of the prospectus, stating the names of the directors, would not be deemed to have virtually assented to their appointment. We think not; it requires two parties to a contract to make it mutual. The statement of the directors of their own qualifications, and the *bona fides* of their scheme, emanate from themselves. The shareholder takes his shares on the faith of the representations being true, and we think the fairest way of testing this would be for the directors to call a meeting of the shareholders at the earliest period, and give them an opportunity of investigating the accuracy of the statements in the prospectus, and either confirm the appointment of directors, or nominate others; for we have a very strong impression that the *sublime AUGUSTUS SMOOTHMALL, Esq., Neverpay Hall,* of the prospectus, might in some cases, by the simple process of a personal introduction, take that one fatal step the poet tells us of; and if this should happen, and the disinterested feelings of the self-elected director still prompt him to press his services, for the benefit of the shareholders, they would have the opportunity of preventing so great a sacrifice on his part.

That the proposed bill will have to encounter some discussion in the House we doubt not, because the continual patching of statutes in the shape of Acts to amend Acts ought, if possible, to be avoided; at the same time, we do not think this objection ought to be made by the House, seeing the reply would be that the necessity for the proposed enactment arises through their own defective legislation. But we are quite prepared to hear some honourable red tapist argue that the preamble of the bill is not proved, from the fact that no case has arisen, or can be quoted as having happened, under the present statute, calling for the amendments the bill proposes. Now, we quite admit we have no case in point, but our anxiety is not for the past but the future. We do not for one moment allege, or wish it to be understood, that our observations are dictated with reference to any company hitherto registered. Prevention, however, is better than cure; and if we show that abuses may be perpetrated, we think we have a right to ask for the best possible protection we can get to prevent it, without having to wait until an injury has been inflicted to afford a precedent for legislative enactment. We do not think we ought to be knocked down, in order to afford evidence to warrant protective measures for Her MAJESTY's other liege subjects; we infinitely prefer that protective measure being passed before such a process has taken place, that we may receive the benefit of the act ourselves.

Yesterday, the *ALTEN AND QUÉNANGEN MINING COMPANY* held their first annual meeting since the amalgamation of the two associations. It will be seen, from the reports lately come to hand, that during the last few months a considerable improvement in the several workings has taken place, and that, on the whole, the prospects are more encouraging than they have been for the last few years. It is true that no profits have been declared, but still it will be seen that the operations have been conducted on a great style of economy, and if there has been an error committed it is to be attributed not to extravagance, but rather to an extreme penuriousness, which, although exercised with a good intention, may possibly have had a detrimental influence on the local prospects of the undertaking. This present year the company anticipate making a profit; this is grounded upon no fallacious estimates, but is based upon the produce already raised, and when the calculation was made the ore was then in the progress of conversion considerably fallen, and consequently a loss was incurred; the directors' intention to copper. Unfortunately, when this arrived in England the price had of this company having always made it an invariable rule not to hold over their produce, but realise it at the current rate ruling the market. This,

with other unfortunate conjunctions combined at the same period, were the causes of the unfavourable results then shown.

Since then, however, the amalgamation of the two companies has taken place. Not only is there a marked improvement at Quenangen, but at Alten, at the Old Mine, new ground has been opened; and Mr. THOMAS, the late manager, previous to his departure for South America, stated that, in his opinion, this discovery had given to the mine a new lease of vitality for a quarter of a century; and it must be borne in mind that this gentleman is no mean authority, he having been employed in the service of the company for more than 20 years, and, therefore, must have studied the formation of the country, and watched the changes and phenomena which occurred in the several mines under his superintendence. His judgment, however, is further corroborated by the views of the several practical persons who formerly were in the service of the company; and it may be remembered that on several occasions we have drawn the attention of the board to the necessity of further explorations in the surrounding district, but, at the same time, we have more especially drawn their notice to the working of the Old Mine, and it is some satisfaction to know that our prognostications as to the value of this portion of the property have been verified, based, as they were, upon the best practical information that could be got.

It cannot be denied but the last few years has been a sore trial to the welfare of the establishment, the enhanced price of coals during the Russian war was a heavy drawback on the profits of the smelting-works; this was followed by the low rate obtained for copper, and the heavy rate of interest for money borrowed.

We have always deprecated the hand-to-mouth system in which these works have been carried on: extreme cautiousness on the part of the board, and sparing economy, almost amounting to niggardliness, on the part of the local management, we cannot conceive to be the best means to arrive at favourable results. A more decided method should be adopted, in order to place the establishment on a right and solid basis. The property has shown great vitality: not one of the companies established in 1825 has experienced less vicissitudes than the Alten Mining Association. The majority of companies then established have perished, many disgracefully, others discreditably; while some that were most pompously ushered into notice, and under influential auspices, are now barely existing; and had there been adequate capital employed here there would have long since been large returns. If the mining accounts were analysed it would be seen that these have each year given a profit. The great expenses that have been incurred were of building and colonization, for such the company were necessitated to do when they commenced mining in Finnmark.

The present prospects show that in the forthcoming year, even under the present limited scale of working, a profit will be made, and possibly a dividend declared. Under all circumstances, the shareholders have no reason to despond over the stability of the workings, and it remains with them to see whether at some future period it may not be beneficial to their interest that they should further develop and explore the vast mineral territory which they possess. In order, however, to do this a judicious outlay of capital must be made, and then we may reasonably anticipate that the mines will hold again that pre-eminent position which untoward circumstances have impeded in late times.

REPORT FROM NORTHUMBERLAND AND DURHAM.

[FROM OUR CORRESPONDENT.]

Nov. 18.—The events of the present week are not of much interest. The fleet of light colliers having arrived, the freights for coal to London have receded to 6*s.* from Newcastle, and 7*s. 3d.* from Sunderland; this is, however, a considerable improvement on former rates.

The account of coals and coke exported from the north-eastern ports in October do not afford ground for encouragement as of late, as they show a decrease at all the ports as compared with the corresponding month in last year. It is probable, however, that this is owing to temporary causes, and that it will soon again show a different result. The low rate of freights has, no doubt, tended to this result, many vessels, both British and foreign, having been laid up in consequence of the freights not being remunerative.

The London and coasting coal trade affords good ground for encouragement, as it is evidently steadily progressing. The Durham and Northumberland coal fields are, it is perfectly plain, gradually resuming their old position—that is, one of absolute supremacy. The increase in the quantity of sea-borne coals during the past two months is indeed very considerable, being no less than 185,922 tons; at the same time, the inland coals sent by canal and railway, for the same period, show a marked decrease. Welsh coals of all sorts show also a marked decrease for the same period. We do not presume that these important facts lead absolutely to the conclusion that those coal fields produce the best coals in Great Britain or the world; this still is, in some measure, a disputed point. We certainly do lean to the opinion that here the best coals are produced, both for house and steam purposes, but we imagine this is only one of the reasons (though an important one) for our supremacy in the markets of the world. The other reasons that may be adduced are the superior arrangements and large scale of those collieries. It is well known that the larger the quantity you produce in one establishment of any one article, the cheaper you can afford to sell that article. All improvements in ventilation, in working, in the conveyance of minerals underground, &c., tend eventually to produce those minerals in a better state for the market, in larger quantity, and at a cheaper rate, so that all that can be effected in this way must benefit the colliery, and also the workmen. To illustrate this point, we may notice that we have actually known instances (in Wales) where the prices for working the coal have been raised to a point ruinous to the colliery, in order to induce the men to work in a dangerous mine. Other reasons it is not difficult to adduce. The continual strikes of the workmen and disputes between them and their employers have tended much to improve the coal trade here.

The subject of harbours of refuge, as might naturally be expected, is attracting much attention here. The evidence given before the Commissioners appears to show very clearly the great necessity, in the first place, of improving the principal existing harbours—the Tyne, the Wear, and the Tees; but whether the Government can be expected to undertake this work is quite a different question. The evidence also shows clearly enough that great necessity exists for the formation of a general harbour of refuge somewhere on the north-east coast. Filey or Redcar appear to be the places pointed to by the evidence. That it is the duty of the Government to make this harbour of refuge there can be no doubt. Much stress has been laid on the point that masters of ships invariably steer on all occasions for the port they belong to, but the fact appears to be lost sight of that at present they have no choice in the matter; if they fail in reaching their port, at present they must make a long run to the north or south to reach a place of safety (that is, presuming that the Tyne, Wear, or Tees is the destined port). But if a safe harbour of refuge were constructed at the point named, it would materially alter the question in that respect—it would then surely be an act of madness, or culpable negligence, for a captain to neglect running into such harbour in cases of emergency.

Important meetings have been held lately in this district respecting proposed new lines of railways, and new branches and extensions of railways: the most important of these are the proposed extension of the Border Counties and North British Railways. With respect to the latter company's scheme, an important addition has been made to it since the last session of Parliament, as they now propose to construct a branch to Langholm. This will, it is presumed, fully ensure their success; indeed, the merits of their previous scheme fully deserved success. The proposed new line up the Valley of the Wansbeck has also many active supporters; it will escape any fictitious opposition, as there will be no rival scheme to contend with, and it will prove very useful and advantageous to the district through which it is intended to pass. It will intersect Northumberland from east to west, and bring a rich inland mineral district into connection with the east coast. The line commences at Morpeth, and joins the Border Counties at Bellingham, near Chollerford.

A serious accident occurred lately at the Monkwearmouth Colliery, by which a man was killed. He was going down the shaft, and got into a tub for that purpose, and was put into the cage. The cage was resting on the keeps, and the slack chain above the cage fell over the side of the cage, and on the chain being drawn up again it got round the man's neck and strangled him. This was certainly an extraordinary and awful occurrence. A man was killed in the same manner four years ago. The Government Inspector suggested that something should be put on the side of the cage to prevent the chain getting over on this manner.

Another fatal accident occurred at this colliery on Monday last, by which a boy, 11 years of age, named Henderson, was killed. He was a horse driver, and it appears had fallen off the shafts where he was riding;

and was so severely crushed by the tubs passing over him as to cause his death. He ought to have been in the first tub, instead of riding on the shafts.

THE IRON AND METAL TRADES OF STAFFORDSHIRE.

[FROM OUR CORRESPONDENT AT WOLVERHAMPTON.]

Nov. 18.—The present is a dull season for shipping, but, making allowance for this, the manufacturers of iron are tolerably well employed. Some are short of orders, whilst others are busy, and, on the whole, there seems a tolerable prospect for the winter quarter. The conviction that there will be an active demand in spring leads to the conclusion that better prices will then be realised for pig-iron. There is, therefore, an indisposition to enter into contracts for forward delivery at present prices. The advance of 2s. 6d. established at quarter-day is generally maintained, superior hot-blast mine pigs fetching 3s. 12s. 6d.; but there is a good deal sold 5s. below that, of only a moderate quality.

In the beginning of the week a good deal of anxiety was felt as to the course which the colliers would take. After going to work at the reduced rates, as observed last week, and getting the pits in working order, the men gave notice for the restoration of the former rate of wages in no less than 180 thick coal, and 136 thin coal pits. These notices expired on Saturday night, and on Monday a large meeting was held at Horsley Heath, at which it was stated that some five or six masters were giving the advance of 6d. instead of 1s. per day, to which at one or two meetings it had been resolved to limit the demands of the colliers. A resolution was passed to the effect that the colliers should not return to work unless the advance of 6d. per day was awarded, and also that those receiving this advance should devote it to assist in supporting the men who remained on strike. A. M. Miller, who has been appointed secretary to the Miners' Union in the district, addressed the meeting, urging various matters, including obtaining a Ten Hours' Bill, &c., as objects of united effort. Since this meeting the men have gradually gone in, and it is now stated that nearly all have returned to work. Doubtless when iron reaches a higher price the advance of the colliers' wages will be conceded. The long resistance of the men, however, has been a most serious loss to themselves, their employers, and the district at large.

Some colliers were brought up at Halesowen, on Tuesday, on the charge of leaving work without notice. They were induced, on the advice of the magistrates, to return to work. A meeting was held this evening at Oldbury respecting this matter, those who called it contending that as the proprietors of coal and iron works are magistrates, and decide these cases, the men are not justly treated; and they are to make enquiries as to the means by which a stipendiary magistrate may be appointed for that district.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

[FROM OUR CORRESPONDENT IN CHESTERFIELD.]

Nov. 18.—The position of the Iron Trade, on the whole, is more satisfactory, and the reports from the different districts confirm the belief that the trade will continue to improve. The works generally are fully employed, and prices well maintained. There is a good general demand for all descriptions of iron.

The Coal Trade is improving, and during the past few weeks the demand has materially increased. It is impossible to witness the continuance of the several strikes which now exist without feelings of regret. The men are entailing upon themselves great misery by their persistent determination not to return to work, but have the entire sympathy of all who are not immediately connected with the masters. Great meetings of the unemployed continue to be held in the different districts affected by the strikes.

At the Thryberg Coal Company's new pit, near Kilnhurst, two men were killed by falling from the corve. Preparation had been made for blasting, and the fuse lighted, when the signal having been given, and not immediately attended to, one of the men stepped out to repeat it, lest they should be blown to atoms. The corve then began to ascend, and the man who had stepped out hung on to the side, which overbalanced the corve, and two out of the three men were killed. Verdict, "Accidental Death." On Friday the engine-house of Broadbank Colliery, near Ashton, was discovered to be on fire; the damage was inconsiderable. A verdict of manslaughter was returned against Ralph Knowles, at Rushy Park Mine, of the same colliery, in consequence of his drawer having been killed by a fall of roof, caused through neglect to prop his place securely.

There is much progress being made in the lead mining districts of Derbyshire in a quiet way, and we hear that most of the new lead mine enterprises are giving satisfaction to their promoters. The Stoney Way Company have sold about 500L worth of ore, got in sinking the shaft and driving the level. The Robin Hood Company, at Matlock, held their half-yearly meeting on Wednesday, but beyond the appointment of new directors and the payment of tradesmen's bills, nothing of any note transpired. There is an enquiry for North Derbyshire and Mill Dam shaves, the former being more frequently asked for. A new company is about to be formed for working a mine at Tideswell, and a meeting will be held on Wednesday for that purpose.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

[FROM OUR CORRESPONDENT IN SOUTH WALES.]

Nov. 18.—The news of the week is rather limited in extent, and few events of actual importance have occurred since we last wrote. The Iron Trade remains in much the same state, few fresh orders having been received. The demand for rails is pretty good, and for the Continent a good supply is regularly required. Pig-iron does not sell quite so freely at present.

For steam coal the enquiry seems to be improving, and some large vessels are now in the Cardiff Docks waiting for cargoes. One of them, the *Teide*, of Cadiz, is 4000 tons burthen, and was towed from London at an expense of 250L; it is intended to load her with 2000 tons of steam coal. This does not look as if any preference was felt generally for North Country coal.

We recently reported the occurrence of a fatal boiler explosion at the Penydarren Iron-works, near Merthyr, and stated that besides the man killed several others were more or less injured. An inquest has been held on the deceased, and Mr. Evans, the Government Inspector, gave it as his opinion that the explosion took place from a deficiency of water, or excessive pressure of steam. The steam-gauge was not in working order, but the plates were sufficiently thick. The jury returned a verdict of "Accidental Death," after the coroner had summed up the evidence in an able and lucid manner.

The recent failure of the large coal firm, Messrs. T. P. Price, of New-port, seems to have affected the affairs of the Monmouthshire Railway Company to an unpleasant extent. Messrs. Price were heavy freighters; and at the time they failed they owed the company about 3000L. This loss has had the effect of reducing the dividend from 5 to 3½ per cent.; but the directors at the half-yearly meeting, yesterday, intimated that a different course would in future be pursued with the freighters. They would be called upon to pay up on certain days, and security would be required from "doubtful" concerns. A shareholder, Alderman Latch, recommended that security should be required from all, but the Vice-Chairman said this would be totally unnecessary. The same gentleman stated that the Messrs. Price owed at one time 5000L, their tonnages being about 700L per month. The company hold no security whatever of the firm.

A shocking accident occurred a few days ago at Blaina. A young man, aged 23 years, named John Jones, was employed at the Cwm Celyn Forge Mills as a brazier. While in the act of throwing a heavy ball of molten metal between the rails, the tongs snapped in two, his foot slipped, and he was caught by the rolls. He must have been drawn between them but for the assistance rendered by his fellow-workmen; and even as it was one of his legs was crushed to atoms. Mr. Soper, the surgeon, performed amputation, but the unfortunate man died two days afterwards.

On Wednesday last the *Times* contained a letter from its Paris correspondent on the state of the Iron Trade in France, and on the effects of the regulations passed from time to time for the protection of the iron masters. Speaking of the superiority of the English iron, the writer says:—

"It has been observed, on a former occasion, that large quantities of English rails were supplied to the Northern line, including 11,000 tons from the Tredegar Works, in Wales. Last month the three years' guarantees given by the makers to the railway company having expired, the whole line laid with the Tredegar rails was carefully inspected, and found, though subject to the heaviest traffic in France, to exhibit but little more than 1½ per cent. of faulty rails. The certificate given by M. Coache, engineer of the Ponts et Chausées, who is interested with the inspection of the railway, states that 'The rails furnished by the company are of very good quality, giving no more than 1-20 per cent. of defective material (*rebats*), after three years' guarantee, of which at least two years and a half have been in service in the principal line from Paris to Lille.'

It follows, therefore, from this documentary evidence that English iron is superior to any that the 'protected' French ironmasters can produce; and that Government either must be contented with an inferior native article for the naval armaments of the country, or must break through the protective laws which cripple the energies of the nation, crush enterprise, and sacrifice the interests and safety of the community, in order that a numerically insignificant fraction should be enriched.

A lecture has been delivered at the Bristol School of Mines on the "Chemistry of Iron," by Mr. Thomas Coomber, F.C.S. The lecturer chiefly addressed himself to the description of solutions of iron in the chemical re-agents, and to methods for ascertaining the quantities of the constituents of minerals containing that substance. The students were advised to make standard solutions with the permanganate and bichromate of potash, and examine them with weighed quantities of piano-forte wire, instead of depending upon oxidising values given by the atomic weights of these substances. The history of the assay of iron by the dry way was then treated of; and matters relating to the treatment of the ore and fluxes in the crucible gone into. The lecturer concluded with a discussion of the various methods of separating and determining the amounts of the constituents of an ironstone.

The "authorised" contradiction of the report that the Admiralty had decided upon using North Country coal instead of that from Wales has somewhat relieved the apprehensions of owners here. They do not fear a fair trial; but they did the effects of a partial and prejudiced one.

RHYMNEY IRON COMPANY.

The twenty-second annual general meeting of shareholders was held on Wednesday, and we learn that a highly satisfactory report for the year was submitted. The customary dividend was declared, notwithstanding the disasters of the current year, and the meeting broke up in a way to indicate from the orders in hand for rails to India and other parts of the world, that with the new year an era of unexampled prosperity in the iron trade will set in. The following are extracts from the report:—

The profit for the year ending June 30, 1858, amounts to 37,221. 1s. 4d., being 8139L less than that of the previous year. Out of this sum, 25,427L 12s. has been paid in dividends, and 12,307L added to the balance of undivided profits. It will be seen by the accounts that this last item now stands at 60,196L, but it must be borne in mind that 10,000L out of that sum has this year been appropriated in part payment of the mortgage, and a further sum of 29,000L will have to be similarly applied: so that although as matter of account of 60,196L appears in the balance sheet intact, 50,000L will be no longer available for dividend. The accounts also show that on June 30 about 60,000L was owing to the company for rails, delivered and in course of delivery, while the available funds were very small. The proprietors will at once perceive from this how necessary it has been to continue to reserve a considerable portion of the profits for working capital; which system, in the opinion of the directors, should not be discontinued, until the service, after payment of the mortgage, shall amount to not less than 50,000L.

The iron manufactured during the year has been 37,844 tons, against 41,512 tons in the preceding year, a decrease of 3683 tons, owing partly to scarcity of water and accidents, as mentioned in the report of November last, and partly to the peculiar nature of the orders requiring more time for execution. But while the quantity of iron made and the profit therefrom is less than in the year ending June, 1857, the result of the past year cannot but be regarded as highly satisfactory, when it is remembered that the year ending June, 1858, comprised a period of commercial distress and difficulty almost unparalleled.

The price of iron during nearly the whole of that time was unremunerative, and the profit that has resulted is mainly from orders taken before the depression.

The stock of ironstone is somewhat larger than in June, 1857, it having been

considered advisable not to reduce the "get" while it could be worked at a comparatively low cost.

The iron on the roads is about the same as last year, full allowance having been made for wear and tear.

The new railway to Cardiff was opened in March last, and is very advantageous to the company, both as regards facilities of conveyance and saving in cost. The 750 shares held by the company are now fully paid up.

The rental shows an increase of 257L on the previous year, the outlay for repairs having been limited to as low a scale as possible.

The expenditure on new works during the year amounts to about 10,000L; they comprise roads in connection with the railway, a pond or reservoir, the commencement of a forge on the Rhymney estate, a warehouse on the wharf at Cardiff, and part payment for the schools. The existing works have been kept in an efficient state, and the new openings for minerals gradually proceeded with.

COMPARATIVE HARDNESS OF METALS AND ALLOYS.

Some important experiments have recently been completed by Messrs. F. Crace-Calvert and R. Johnson, for the purpose of determining more accurately the comparative degree of hardness of bodies. Hitherto the calculation has, been made by rubbing one body against another, that which scratches the other being admitted to be the harder of the two. To obtain greater precision, Messrs. Calvert and Johnson employed a machine on the principle of a lever, with the important modification, that the piece of metal to be experimented upon can be relieved from the pressure of the weight employed without removing the weight from the end of the longer arm of the lever. The machine consists of a lever with a counterpoise and a plate, on which the weights are gradually placed. The fulcrum bears on a square bar of iron, passing through supports. This bar is graduated, and has at its end a conical steel point, 7 millimetres or 275 of an inch long, 5 millimetres or 197 of an inch wide at the base, and 14 millimetres or 049 of an inch at the point which bears upon the piece of metal to be experimented on, and this is supported on a solid piece of iron. The support, or point of resistance, is raised or lowered by a screw, and when this screw is turned, the whole weight on the lever is borne by the screw and a second support, midway between the fulcrum and the weight plate. By reversing the screw, the weight on the lever is re-established on the bar.

When they wished to determine the degree of hardness of a substance, they placed it on the solid iron, and rested the point upon it, and then gradually added weights on the end of the lever, until the steel point entered 3½ millimetres or 128 of an inch during half an hour, and then read off the weight. A result was never accepted without two experiments at least being made, which corresponded so far as to present a difference of only a few pounds. The subjoined table gives the comparative hardness of the more common metals:—

Names of metals.	Weight employed.	Calculated cast iron=1000.
Staffordshire cold-blast cast-iron—grey, No. 3.	Lbs. 4500	1000
Steel.	4600	932
Wrought-iron from the above-mentioned cast-iron.	4550	948
Platinum.	1800	375
Copper, pure.	1445	301
Aluminium.	1300	271
Silver, pure.	1000	208
Zinc ditto.	880	183
Gold ditto.	800	167
Cadmium ditto.	520	108
Bismuth ditto.	250	52
Tin ditto.	130	27
Lead ditto.	75	16

This table shows the high degree of hardness of cast-iron as compared with that of all other metals, and although they found alloys which possessed an extraordinary degree of hardness, still none were equal to cast-iron. With reference to the alloys of copper and zinc, they give the following table. To obtain the last column, they multiplied the percentage quantity of each metal by its respective hardness, added the two results together, and divided by 100. The quotient is the theoretical hardness:—

Formula of alloys and percentages.	Weight employed.	Obtained cast iron=1000.	Calculated cast iron=1000.
{ Cu 82-95	Lbs. 2050	427-08	280-83
{ Cu 70-17	2250	468-75	276-82
{ Cu 79-56	2250	468-75	276-82
{ Cu 29-41	2250	468-75	276-82
{ Cu 74-48	2250	468-75	276-82
{ Cu 25-32	2250	468-75	276-82
{ Cu 66-06	2270	472-92	261-04
{ Cu 33-94	2270	472-92	261-04
{ Cu 49-32	2900	604-17	243-33
{ Cu 50-68	2900	604-17	243-33
{ Cu 32-71	Broke with 1500 lbs., without the point entering.		
{ Cu 67-26	Broke with 1500 lbs., with an impression ½ mm. deep.		
{ Cu 44-64	Entered a little more than the above; broke with 1500 lbs.		
{ Cu 75-36	Entered a little more than the above; broke with 1500 lbs.		
{ Cu 19-57	Entered 2 mm. with 1500 lbs.; broke with 1700 lbs.		
{ Cu 80-43	Entered 2 mm. with 1500 lbs.; broke with 1700 lbs.		
{ Cu 16-30	Entered 2 mm. with 1500 lbs.; broke with 1700 lbs.		
{ Cu 80-79	Entered 2 mm. with 1500 lbs.; broke with 1700 lbs.		

These results show that all the alloys containing an excess of copper are much harder than the metals composing them, and what is not less interesting, that the increased degree of hardness is due to the zinc, the softer metal of the two which compose these alloys. The quantity of this metal must, however, not exceed 50 per cent. of the alloy, or the alloy becomes so brittle that it breaks as the steel point penetrates. They believe that some of these alloys, with an excess of zinc, and which are not found in commerce, owing to their white appearance, deserve the attention of engineers. There is in this series an alloy to which they wish to draw especial attention—The alloy Cu Zn, composed of—Copper, 49-32 parts; zinc 50-68 parts=100 parts.

Although this alloy contains about 20 per cent. more zinc than any of the brasses of commerce, still it is, when carefully prepared, far richer in colour than the ordinary alloys of commerce. The only reason that they can give why it has not been introduced into the market is, that when the

amount of zinc employed exceeds 33 per cent. the brass produced becomes so white that the manufacturers have deemed it advisable not to exceed that proportion. If, however, they had increased the quantity to exactly 50-68 per cent., and mixed the metals well, they would have obtained an alloy as rich in colour as if it had contained 90 per cent. of copper, and of a hardness three times as great as that given by calculation. In order to enable engineers to form an opinion as to the value of this cheap alloy they give the degrees of hardness of several commercial brasses:—

Commercial brasses.	Weight employed.	Calculated cast iron=1000.
Large bearing	{ Tin 12-82	Lbs. 2700
	{ Zinc 5-13	562
Mud Plugs ..	{ Tin 10	750
	{ Zinc 10	382
Yellow brass	{ Copper 64	520
	{ Zinc 36	238
Pumps & pipes	{ Tin 5-9	343
	{ Zinc 7-5	237

* These alloys all contain tin.

The alloy Cu Zn possesses another remarkable property—the facility with which it is capable of crystallising in prisms half an inch in length, of extreme flexibility. There is no doubt that this alloy is a definite chemical compound, and not a mixture of metals, as alloys are generally considered to be. Their researches on the conductivity of heat by alloys, which they have recently presented to the Royal Society, leave no doubt that many alloys are definite chemical compounds.

BRONZE ALLOYS.	Weight employed.	Obtained cast iron=1000.	Calculated cast iron=1000.

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to affirm the unsoundness of conducting a joint-stock company on principles which would be repudiated by any private business firm. The one, like the other, should start with a paid-up capital of a respectable amount, which so long as it remained in the shape of cash would be so much valuable property, represented by the shares of the company in the market. In some districts of the county of Cornwall the ore makes very deep; this is the case in the bulk of our largest and best deposits of copper, but when we state the fact that the majority of these mines have been more than once abandoned by disheartened shareholders as a total loss, it becomes a positive duty to search for a cause which in its results has been so frequently productive of such disastrous consequences. It we are on our part to say that a long succession of calls on the purses of non-professional shareholders is not productive of dislike, and ultimately of disgust, let the object for which they are made be ever so genuine; and when this statement is coupled with the transparently obvious assertion that the affairs of men are in a constant state of transition, we need go no further in search of adequate causes to account for the deplorable and unnecessary losses which are of such frequent occurrence in British mining.

ON THE MANUFACTURE AND USE OF COKE.

The third number of the *Transactions of the South Wales Institute* contains two very valuable papers, the one on the Manufacture and Use of Coke, the other a description of Alger's Elliptical Blast Furnace, to which we have already referred in the *Mining Journal*.

Chemical analysis shows that coal contains as impurities silica and sulphur, and as constituents capable of being volatilised, hydrogen and oxygen. After describing the chemical changes which take place in the blast furnace, Mr. John Cox, of Newport, the writer of the paper, remarks that of the solid impurities contained in coke sulphur, which has a great affinity for metallic iron, immediately seizes it in the zone of fusion, and it is scarcely possible to conceive that if present its injurious effect can be avoided, but this is immaterial, since it is possible almost entirely to force the fuel from it. That steam, in its evolution, will carry off sulphur as sulphurised hydrogen, there can be no doubt, as that it does so when the coke is cooled *en masse* outside the oven is evident to the senses, as before stated; but that if the process stopped at the point at which the heat causes the convert the water into steam (as is then the case) a considerable quantity of it would remain in a state capable of being washed out is a fact which was prominently brought to the writer's notice some years since, by the rapid destruction of copper cables of blast furnaces floating in water in which a small quantity of such coke was immersed, and which originated the idea that if the coke was first cooled in the oven, and then, after being so cooled, a sufficient quantity of water was poured in thoroughly to wash it, to run, in fact, through it, and pour in a stream out of the oven, we should nearly accomplish its thorough purification.

This anticipation has not been disappointed in practice, and it is found that when the coke is worked at a very high temperature, a large quantity of water, estimated at two tons for every ton of coke it contains, can be poured into it without injuring the after action of the oven, or preventing its retaining sufficient heat thoroughly to dry the coke before it is drawn.

Cooling the coke by water thrown on it inside instead of outside the oven, having long been practised in the North of England, to reduce the temperature of the oven and facilitate the process of drawing the coke (although the plan has been generally discontinued, in consequence of its injurious effects upon the oven), the practicability of so doing was established, and it became only necessary to construct the oven of such a material and in such a manner that the cost of its repair should be kept within the bounds of moderation, and to work it at such a temperature that the heat of the mass at the moment the water is poured in should be sufficient to allow of the application of a very large quantity of it.

This first-named difficulty appears to have existed more in imagination than in reality; the judicious application of known refractory bodies easy of attainment (silica and pure fire-clay) in different proportions, for the formation of bricks to suit the various degrees of heat to which the different parts of the oven are exposed, will enable the architect to build an oven capable of resisting for a considerable time the combined action of the heat and water; and if proper arrangements are made in its construction for facilitating its repair, the cost will be but trifling as compared with the great advantage gained.

Silica, the other solid impurity in coal, which is of a nature neither soluble or volatile, enters so minutely into its composition (as it forms a portion of the plants of which it was composed) as to prevent the possibility of its separation. It follows, therefore, that if this impurity must necessarily be imparted to the iron, the value of the coal is immensely deteriorated by it. The affinity of silica for iron in its metallic state is very small as compared with its affinity for its oxide, for which it is of great use in the process of the purification of iron from it consists in oxidising a portion of the iron, which immediately separates the silica from the remainder, and unites with it in the form of slag. Referring to the action of the high furnace, it, therefore, becomes evident that the more perfectly the ore is oxidised, and the more highly it is carbonised, the more completely it must be separated from its silicious base, and the pure from silica the iron ought to be; a self-evident truth strangely at variance with the fact that grey iron, iron the most highly carbonised, invariably contains the largest amount of silica. It has ever been supposed that the silica in pig-iron has its origin in the ore from which it is produced, but as it is impossible to believe this, consistently with the knowledge that the deoxidation and carbonisation of the ore which separates it from silica, and account for the fact of the greatest amount of silica being found in the most highly carbonised iron, it is difficult to avoid the conclusion, that the iron, if properly carbonised, is thoroughly deoxidised in the zone of carbonation, and takes up silica again. In its passage through the zone of fusion, in other words, that the silica found in grey pig-iron is derived from the fuel and not from the ore; in which view we are supported by the fact that those irons which, being highly carbonised, contain most silica are the longest in passing through the furnace, and consequently through the zone of fusion. The charcoal of wood contains an amount of ash often in excess of that contained in many of the Welsh coals, and the percentage of silica in the ash is also larger; yet, although the rule that the amount of silica in the iron is in proportion to its carbonation holds good with that made of charcoal, as well as with that made from coke, still the quantity in each sort of charcoal iron is less than in the same sorts of coal or coke iron. This second paradox, at first sight, appears to militate against the view of the writer as to the origin of silica in iron is easily explained, if we consider that silica, in the form of glass, as it exists in the cinder of the high furnace, has no operation on iron, and that the lime and potash existing in the ash of charcoal is sufficient to flux the whole at a very much lower temperature than the ash of coal (which contains so small an amount of lime to flux it) will yield to.

Mr. Cox then described the chemical changes which the fuel may be made to undergo, and the process which goes on in the blast furnace; arguing that fuel has much to do with the manufacture of good quality iron, and that the carbon of coal can be rendered nearly as free from sulphur (the most deleterious substance that combines with it) as the carbon of wood.

An interesting discussion upon the ideas expressed in the paper ensued, the President (Mr. E. Rogers), and Messrs. Riley, Roper, and Cox, taking the principal parts. The importance of Mr. Cox's paper was unanimously acknowledged, and doubtless it will have the effect of directing attention to those points wherein improvements would tend materially to render the manufacture of best quality iron both more easy and more economical.

The *Transactions* are published at the *Mining Journal* office, price 2s. 6d. each part.]

THE COAL MEASURES.—We have received from Mr. H. Landrin a very elaborate paper, entitled "Considérations Philosophiques sur l'Ordre de Superposition des Combustibles dans la Nature." He has treated his subject with much ingenuity, and given ample evidence that he is thorough master of it. He remarks that millions of ages elapsed between the period when the earth was in a state of incandescence and its refroidissement *secondaire*, and we may conceive all possible reactions in the several states through which our sphere has passed. One remarkable period was that in which solidification first commenced, in which the earth was moist with hot water, and an atmosphere saturated with steam and carbonic acid. When the temperature fell to 60° C., the vegetable elements commenced to develop themselves, and this went on until the temperature was reduced to 40° C.; then a considerable absorption of carbonic acid in the midst of aqueous vapour, suitable for facilitating the operation of affinity. Animals with respiratory organs could not exist in this atmosphere, where, however, plants vegetated easily, or even luxuriantly. These were, therefore, the first born, which is as it should be, since animals cannot live without plants, although plants could exist without animals. The paper will be read with interest by all connected with the working of coal, or with geological pursuits.

"CURIOSITIES OF SCIENCE."—Under this title Mr. John Timbs, F.S.A., has published one of his interesting series of Scientific Manuals. Those who have read "Things not Generally Known," or the "Year-Book of Facts," by the same editor, will readily understand the value and character of the volume, and to those who have not we may say that "Curiosities of Science" contains as much information in 250 pages as could otherwise be gleaned from reading elaborate treatises on physical phenomena, acoustics, optics, astronomy, geology and paleontology, meteorology, nautical geography, magnetism, the electric telegraph, &c. A vignette of the safety-lamp, made by Sir Humphry Davy's own hands, and now in the possession of the Royal Society, is given, and a very interesting general description of that valuable invention is appended.

COMPARATIVE PHILOLOGY.—There is an old Grecian proverb much respected by students who rely rather upon judgment than memory, that "A large book is a great evil"; yet philologists generally appear to be totally ignorant even of its existence. Bopp, in his very elaborate treatise on *Comparative Grammar*, seemed almost inclined to act upon the opposite of this maxim; and we fear that Grimm, and most others, would be open to the same grave charge. Now, these excessively tedious authors must surely forget that in addition to mystifying their subject, they render it doubtful to their readers what the ideas really are which they wish to convey to them. We are glad to find that our respected correspondent, Dr. Hyde Clarke, has adopted a more rational course, and laid his opinions before his readers in the plainest possible language. The *Short Handbook of Comparative Philology* (just published by Mr. W. Hale, of High Holborn) proves in the most decisive manner that he has carried his researches far beyond his predecessors, and the result is that he has made discoveries of the most amusing and interesting character. Confounding ourselves to that part of the science of philology bearing directly upon the English language, we shall give Dr. Clarke's views on that point. Dividing the languages of Europe into four great families—the Indo-European, the Ugro-Tartarian, the Turkish, and the Syro-Arabian—and subdividing the first of these into Germanic, Celtic, mixed Celto-Roman, Hellenic, and Slavonic, the English will be classified as belonging to the Germanic stock, of which the leading living tongues are the English, Frisian, Dutch, German, Danish, Swedish, and Icelandic. Of these the first two—the English and the Frisian—may be considered as belonging to the Anglo-Saxon class. The words of the English tongue are mostly of Germanic or of Latin root, and, therefore, give a groundwork by which an Englishman may help himself in learning the European tongues of these stocks. For example, water is in Anglo-Saxon water; in Flemish, water; in German, wasser; in Danish, vater; and in Swedish, vatten; all these words being much alike. Again, admiration, which we derive from the Latin admiratio, is in French, admiration; in Italian, ammirazione; in Spanish, admiración; and in Portuguese, admiração. That these words are derivatives of the same parent, the youngest philological student will readily admit, but it requires long and diligent research to prove that the word *admiratio* is derived from the word *leaves*, crowd from rush, crumb from clod, from lime, sneeze from nose, sift from heart, shave from hew, and many other of the derivatives which Dr. Clarke so clearly explains. Taking the treatise as a whole, we must regard it as a literary curiosity, well worthy of the perusal of all who feel an interest in the marvels which indefatigable study discloses.

WEEKLY LIST OF NEW PATENTS.

GRANTS OF PROVISIONAL PROTECTION FOR SIX MONTHS.—E. L. BENZON, Sheffield: Manufacture of steel. (From F. A. Lohage, Una, Prussia.)—C. WYE WILLIAMS, G. EYTON, Liverpool: Construction of locomotive and other steam-boilers.—H. T. MONET, Welbeck-street, Cavendish-square: Application of a mineral named "Deterior," as a disinfecting, preserving, absorbing, and curative powder.—J. FOWLER, R. BURTON, D. GREGG, Cornhill: Applying motive power to actuate ploughs and other agricultural implements.—J. E. NAPIER, Glasgow: Obtaining motive power by means of heat.—I. BANGS, Kensington: Telegraphing by electricity.—W. H. TOOTH, Lampeter-street: Manufacture and construction of fire or furnace bars.—E. HOWLAND, J. DEWHURST, Manchester: Improvements in steam-engines, and in the valves connected therewith, which said improvements in valves are also applicable to safety valves.—S. DAVY, Rouen, France: Blasting powder.

FURNACES.—An improved arrangement of furnaces, by which the supply of the fuel to the grate bars may be continuous and more uniform than hitherto attained by hand stoking, has been provisionally specified by Mr. Charles Atherton, of Woolwich Dockyard. He places a feeding chamber extending the whole length of the fire grate as a receptacle for the fuel, from which chamber the fuel descends spontaneously through an opening extending the whole length of the furnace. The fuel in the feeding chamber does not attain such a temperature as to produce destructive distillation, but such gases as may be evolved from the raw fuel at the point where it leaves the feeding chamber will make their way into the furnace, and become ignited in passing over the fire. To facilitate and ensure the continuous feeding, the bars are so arranged that the grate forms an angular or curved surface, inclining across the furnace from the feeding chamber to the ashpit, at a suitable angle or curve.

WASHING IRON MINERAL.—Mr. Joseph Maitre, of Thieffrain, France, has patented an improved machine for washing iron mineral. The ore is thrown on a cast-iron plate placed before a grating; and another workman adding the water causes the ore to move on, the fine ore passing through the grating, and the rougher ore passing under the stampers, whence, after being crushed, it goes out at the same time with the fine ore, which, having passed through the grating, is drawn on each side of the stampers. A parting in the shape of a V being placed to turn aside the fine ore from the stampers, it then falls into the trough with the crushed rock ore.

PIGMENTS.—In producing a substitute for oil to be used with, and in the preparation of pigments Messrs. Roberts and Dale, Manchester, use products from gas or other tar, mineral oil for instance, and resin, or such other substances as are analogous thereto; these they combine together, and pigments may be mixed therewith, according to the colour of paint required. In preparing pigments, they grind them with a portion of the above compound.

LAMPS.—Mr. F. Jaquemart, Paris, proposes substituting a current of gas for the current or blast of air that has hitherto been passed through the flame emanating from heavy oils or hydro-carbons in an ignited state. The current of air usually employed in combination with such inflammable substances is intended to prevent the evolution of smoke or unburned carbon from the flame, but it has been found that a more perfect combustion, and a better result, is obtained by forcing a current of some suitable gas through the flame instead of simple atmospheric air. The combustible material is supplied by means of a suitable pipe to an annular space at the top of the burner, and suitable arrangements are made to catch any overflow, as is usual in lamps of this description. At the centre of the burner is a vertical pipe, made something like an ordinary Argand gas-burner, having an annular slit, or a series of holes, made in its upper end, to allow the gas that is supplied to the pipe from any suitable or convenient source to issue therefrom. Air is allowed to pass freely up the pipe, which is provided with a bottom with a valve, whereby the supply of air may be regulated. If desired, burners may be made without any centre aperture, and the gas alone supplied to the flame.

PRESERVING SHIPS' BOTTOMS.—Mr. Dan. McCrae, Greenock, N.B., claims the use of bone grease, or greasy matters obtained from "kitchen stuff," with or without sulphate of copper or other poisonous matter mixed with it, as a preservative for ships' bottoms.

PRESSURE AND VACUUM GAUGES.—An improved gauge, which consists of a cylinder, piston, and spring, with a quadrant and pinion acting upon a finger or hand on a dial, for indicating the pressure of the steam or the vacuum formed in any given space, was provisionally specified by Messrs. Casarelli, of Liverpool. The chief feature of the invention consists in the application of a cylinder and piston, with a spring inside, and connecting the piston-rod to the quadrant and the regulating screw, so that the gauges can be adjusted and kept correct.

STEAM-ENGINES—VALUABLE INVENTIONS.—An ingenious mechanic, named Thomas, of Chacewater, has invented and patented the following valuable contrivances:—A self-regulating and self-supplying boiler for steam-engines, by which explosion is rendered next to impossible from inattentive feeding by the engineman in charge. By a clever but simple contrivance the condensed steam is returned to the boiler in a hot state, thus causing a considerable saving in fuel. The model works admirably. Should actual experience on a large scale be attended by equally favourable results, a vast amount of difficulty will be overcome, especially where water of a corrosive or sedimentary nature only is to be procured. A smoke condensing apparatus: this we had an opportunity of witnessing at work. A fire was made in a closed stove, with coal smoke, to create as much smoke as possible. This passed through a horizontal chimney, to the great annoyance of all present: half a minute after the contrivance was applied not a particle of smoke could be discerned. The smoke was perfectly annihilated, and converted into matter, from which the inventor states he can manufacture gas of a very superior description, or can utilise as a manure of extraordinary value. He states that by the aid of four 24-in. cylinder engines he can free all London from smoke, and render the product of immense value. Two such engines would suffice for such towns as Birkenhead or Leeds. The contrivance improves draught and circulation: the model certainly performs all this. Though we confess we are sceptical of the inventor's widely extended views on the subject, still we believe it to be practicable, and to manufacturing towns and large cities an inestimable boon. They have both been patented, and will doubtless ere long be brought before the public, when their capabilities will be fairly tested on a large scale.

RAISING AND LOWERING WEIGHTS.—Mr. Van Elven, Clapham-road, proposes to connect to the four corners of a case, box, or other recipient, four or more grooved rollers, which are caused by suitable springs to run in and be pressed against upright rails or frames of T-iron, or of frames of any other suitable material; the top of the case is connected to one end of a belt, which is carried over pulleys held by links from a cross bar, while the outer end of the belt is connected with a counterbalance weight.

MANUFACTURE OF FUEL.—Mr. Edward Owen, Blackheath, provisionally specified an invention for the production of an improved fuel. He grinds or reduces ordinary peat charcoal to fine powder, mixes the powder with a bituminous substance, and if desirable compresses it; in either case the material, in the form of rude blocks, is rendered carbonisable, which may be conveniently done in the same manner as the carbonisation of coal is effected in gasworks. By using this fuel in smelting and metallurgical operations the advantages attained are superior to those where wood charcoal is at present employed, whilst at the same time this fuel is produced at a much less cost.

SELF-ACTING RAILWAY BREAK.—Mr. W. R. Jackson, Baltimore, attaches the break blocks to levers, which are actuated by springs arranged in such a manner that whilst the tractive power is active the wheels are free to revolve, but immediately the steam is shut off the breaks are applied.

PREVENTING INCRUSTATION IN STEAM-BOILERS.—Mr. McCafferty, of Lancaster, Pennsylvania, U.S.A., proposes to use black gum catechu, and employ a sufficient quantity to keep the water in the boiler at a light reddish brown colour—about the colour of port wine. While that colour is maintained incrustation will not occur, and previous accumulations will be removed.

BROCHAND'S TRAVELLING MILL AND MILLSTONES.—Brochand's specification, just filed by Mr. Henry, patent agent, Fleet-street, relates to the combination of a mill and its appurtenances with a carriage, in such manner that it may be moved from place to place, and set at work without dismounting it; it is principally intended as a horse-mill. The millstones are characterised by a combination of straight and curved master and guide furrows, leading into one another. There is also an arrangement for preventing transmission of shocks and jerks from the horse to the millwork.

NEW SUBMARINE TELEGRAPH CABLE.—Messrs. Stephenson and Binks, of Millwall, have invented an entirely new method of combining the wire covering of submarine electric cables, by which not only increased strength for a given number of wires is obtained in a cable; but its liability to stretch and kink, which are among the chief disadvantages of the present mode of construction, is entirely obviated. The new cable consists internally of four insulated conductors, which are twisted together with a gauge of 1/8 in., so as to form a very light, though solid, rope, of about three-quarters of an inch diameter; over this are braided twelve flat strands of No. 15 gauge iron-wire, each strand containing five wires. The operation is performed by the ordinary braiding machine, now in use for putting the woolen coverings to the cords of window-blinds, but constructed on an enlarged scale. A cable so constructed would be indisposed to twist or kink while being paid out or stowed away; and one marked peculiarity in it would be, that to stow it securely on board ship would be necessary to take it fore and aft on deck, as it could not be coiled away, having no twist in it. This is anticipated, would be rather an advantage than otherwise; as there has always been a difficulty in finding ships of sufficient beam to allow electric cables to be stowed on board in coils large enough to avoid undue risk from kinking. Of course, it would be impossible to take any cable, fair and aft, in rows, that was not at the same time passive and pliable. This is obtained by covering the ordinary insulating coating of gutta-percha with a thick coating of India-rubber, which renders it more elastic, and at the same time totally impervious to water at any pressure. The weight of this cable would be 2 tons per mile, so that its specific gravity being low, it would be capable of sustaining many miles of its length in water. Its breaking strain is between 7 and 8 tons, which could be doubled by altering the gauge of the outer wires; and in the case of a wire breaking, it would be impossible for it to strip, and the flexibility would be in no material degree reduced.

PATENT ELONGATING TUNNEL TELEGRAPH CABLE.—A novel and ingenious form of telegraph cable, adapted to submarine purposes, has just been patented by Capt. Drayson, R.A., and Capt. Binney, R.E. They propose to provide a continuous vulcanised rubber tube (square on the outside and round on the inside), and within this, place a copper conducting wire for the conveyance of the current. At intervals along the line the tubing is enlarged, and the wire coiled, the effect being that in the event of the cable stretching the wire is not broken, but simply uncoils to the requisite extent. It is remarked that, in nature, the greatest simplicity of construction and application compatible with efficiency is largely manifested, and this is undoubtedly the desideratum, though generally the last attainment, in art and science. It is well known that perfect and permanent insulation is absolutely necessary to enable a wire to conduct electricity. This insulation is now effected by embedding a copper wire in gutta-percha bridled over with hemp. The gutta-percha is a non-conductor; but it is then enclosed in an iron-wire coating, which is a very good conductor. The copper or message wire is, therefore, separated from that which would at once destroy insulation by (as in the present Atlantic Cable) only one-eighth of an inch of non-conducting substance and some hemp, through which water soon penetrates. This non-conducting substance is soiled by moderate heat, and when warm yields readily to pressure, and very commonly contains air-bubbles. It will then be readily understood that by means of the heat and pressure to which the cable is exposed when stowed in the hold of a vessel) the gutta-percha is liable to be softened, and the copper wire to be forced through until it nearly or quite touches the hempen layer, which, being only about one-twentieth of an inch in thickness, is of little avail in preventing immediate connection between the copper and iron. Besides, the friction inevitably attendant on the paying out, and the heat evolved in consequence, greatly tend to increase the risk of injury. Although not always perceptible to the operators, it is nevertheless a fact that whenever the electric current is retarded in its transit through the conducting medium it at once evolves magnetism. The tunnel cable (a full account of which is contained in a pamphlet published by Messrs. Longman) possesses within itself those qualities which will enable it to resist the difficulties by which it will be in deep water be surrounded.

ROYAL ASYLUM OF ST. ANN'S SOCIETY.

BY VOLUNTARY CONTRIBUTIONS.

NEW CANDIDATES should be IMMEDIATELY NOMINATED. Children, whether orphans or not, of parents once in prosperity are eligible for this institution. Subscriptions gratefully received.—Office, 2, Walbrook. E. F. LEeks, Sec.

CITY OF LONDON LIFE ASSURANCE SOCIETY,

18, NEW BRIDGE STREET, BLACKFRIARS. E. F. LEeks, Sec.

SPECIAL APPEAL TO THE HUMANE AND

BENEVOLENT.—GEORGE SPATLEY, lately a sharebroker in the City of London, has, through loss and bereavement, become an INCURABLE LUNATIC. His WIFE and FOUR CHILDREN (one only three months old) are by this dreadful calamity left UTTERLY DESTITUTE and helpless, and almost without the common necessities of life. A few gentlemen who knew and respected the stricken man have inserted this advertisement, that this case may more widely meet the eye of the charitable and benevolent, and cause them to give of their wealth to this family—to her who is more afflicted than the widow, and to the children who are worse than fatherless.

Subscriptions will be thankfully received by Mr. R. HIBBERD, 20, Finch-lane; Mr. B. CASTELLO, Stock Exchange; or Mrs. EMMA SPATLEY, 15, York-terrace, Charles-street, Albany-road, Old Kent-road.

PARTNER WANTED, in a PROFITABLE COLLIERY recently opened, and in FULL WORK, to take an active part in the commercial department, and to advance £1000 or £2000, as may be agreed on.

TO BE SOLD, OR LET ON LEASE, FOUR VALUABLE COAL FIELDS, on the celebrated Coleford High Delf Vein, in the Forest of Dean, Gloucestershire.

TO BE SOLD, OR LET ON LEASE, THE valuable MINERALS of ANTHRACITE COAL and IRONSTONE in the ESTATE of BLAEN GARNANT, near Bettws, Carmarthen. This property adjoins the Llanelli and Llandudno Railway, which communicates with the shipping port of Llanelli.

NUMEROUS VEINS OF IRONSTONE of superior quality, known as the RHAS YACH and other associate veins of the lower measures in the South Wales coal basin, situated near Ponteberne, in the Gwendraeth Valley, Carmarthenshire.

A land-sale ANTHRACITE COLLIERY, near Lanon, Carmarthen. AN EXTENSIVE COAL FIELD, near Llanelli, Glamorgan.

Apply to Mr. JOSHUA RICHARDSON, C.E., Neath, South Wales.

TO IRON AND BRASSFOUNDERS AND GENERAL IRONMONGERS.—FOR SALE, in one of the principal towns in the South of England, a long ESTABLISHED BUSINESS in each of the above trades, and which may be had together or separately

PROSPECTUS.

THE GREAT SHIP COMPANY (LIMITED).
Capital £300,000, in 300,000 shares of £1 each.
Deposit, 2s. 6d. per share on application for ten shares and upwards. Less than ten shares must be fully paid up on application.

DIRECTORS.

(Acting until the first ordinary meeting of shareholders.)
WILLIAM JOHN BELLE, Esq.
The Hon. F. H. F. BERKELEY, M.P.
R. J. R. CAMPBELL, Esq., M.P.
WILLIAM DARGAN, Esq.
HERBERT INGRAM, Esq., M.P.
WILLIAM JACKSON, Esq., M.P.
L. S. MAGNUS, Esq.

(With power to add to their number.)

AUDITORS—H. C. Beloe, Esq., Liverpool; H. Guedalia, Esq., London.

ENGINEER—I. K. Brunel, Esq., C.E.

SOLICITORS—Messrs. Montague Leverton and Hawley, 12, St. Helen's-place, E.C.

BANKERS—Messrs. Glyn, Mill, & Co., 67, Lombard-street.

BROKERS.

Messrs. George Bournand and Co., 69, Lombard-street.

Messrs. Field, Son, and Wool, 9, Warfam-court, Throgmorton-street.

Messrs. Price and Brown, 4, Change-alley, Cornhill.

SECRETARY—Mr. John Henry Yates.

The desire prevailing on all hands that the *Great Eastern* steam-ship should be set in motion, and a feeling that the national character for energy and perseverance would suffer in the estimation of the world, if the completion of so splendid a specimen of naval architecture and mechanical ingenuity were to be further deferred, have led to the proposal of forming a company for the purpose of purchasing, completing, and sending her to sea.

In order carrying power, with greatly accelerated speed, and ability to coal for an entire voyage, could only be efficiently secured by great size. To carry out this principle, which has now obtained universal assent among practical men, the *Great Eastern* has been constructed, and has cost to the present time about £540,000. To raise this sum, the Eastern Steam Navigation Company has exhausted the power of making calls on its shareholders, and has incurred a debt of about £30,000. The present proprietors are a comparatively small body (about 300 in number), who are not inclined as a company to increase their risk; and although a large and influential portion of them are willing to subscribe their fair quota towards finishing the ship, there are legal difficulties which prevent their doing so, unless the ship be sold, consequently the proprietors have determined upon taking that course.

To purchase the *Great Eastern* as she now lies, and with those contracts completed, which form part of the liability of the old company, to fit her in all respects for sea as a first-class passenger ship, and to provide working capital, £300,000 would be the utmost sum required, and this it is proposed to raise by the issue of 300,000 shares of £1 each in a company with limited liability—called the Great Ship Company (Limited).

Calculating from this basis the cost per ton at which the *Great Eastern*, ready in all respects for sea, would come into the possession of the new company is less than that of a first-class sailing vessel, and not much more than one-fourth that of a first-class steamer; while in comparison with the latter, her working expenses will also be proportionately less, owing to her immense size, which enables her to carry double the proportionate tonnage at nearly double the velocity.

Her chances of success in other respects may be estimated by the fact that she will be able to carry her fuel for the longest voyage, avoiding the delay and expense of coaling at foreign ports, and still have proportionately more room for profitable cargo and a larger number of passengers than any existing steamer. She will be fitted with all the appliances of this mechanical age has been able to devise for taking in her fuel and cargo, and for discharging the latter with the greatest rapidity, and will be supplied with comforts and conveniences unattainable in a smaller vessel.

Her great length, while offering very little extra resistance to the water, admits of the combination of the screw and paddle for the purpose of propulsion, from which a rate of speed heretofore unexampled will be obtained; for when it is considered that every increase of size has always hitherto been attended with increase of speed, and of proportionate carrying power, there is little fear that the computations of science will in this case fail short of their usual accuracy.

With a high rate of speed, the freedom from disturbing motion her great length will give, and the enormous strength of her construction, the *Great Eastern* cannot fail to obtain the preference of travellers and emigrants, and secure the freight of goods requiring speedy delivery; although it is not necessary she should carry her full complement of either to arrive at an exceedingly profitable result upon the reduced capital of the new company.

But apart from the considerations of profit which properly belong to all mercantile operations, there are others which invest the successful prosecution of this undertaking with something of national importance. It is hardly too much to say, that to no other country could such a creation have been possible, and certainly on no other could it confer such advantages. With colonies and dependencies in every region where external aggression may have unexpectedly to be resisted, or internal commotion suppressed, the resources of the empire would be multiplied, and its power almost doubled, by the rapidity with which they could be had at a concentration for every emergency.

The progress made in negotiations for the purchase, and the confidence placed in the ship and in this company by the proprietors of the Eastern Steam Navigation Company (Limited), may be gathered from the annexed resolutions unanimously passed at the special general meeting of their shareholders, held at the London Tavern, on Tuesday, the 24th of November, 1858, and from the fact that more than three-fourths of that body have agreed to become shareholders in this company, to the capital of which they have subscribed largely, viz. —

1.—That the Eastern Steam Navigation Company (Limited) be, and the same is hereby, dissolved, subject to the provisions of the Joint-Stock Companies' Act, 1856-1857, and that the said company be wound-up voluntarily under the provisions of the same Act.

2.—That Henry Thomas Hope, Esq., of 116, Piccadilly; Edward Ladd Beets, Esq., of Preston Hall, near Maldon; Samuel Beale, Esq., M.P., of Russell-square; and John Yates, Esq., of Snareybrook, Essex, and they are hereby appointed liquidators under the said Act, to wind-up the said company.

3.—That the said liquidators be authorized in the event of their selling the ship belonging to the said company, to a certain registered company called the Great Ship Company (Limited), to receive in compensation, or part compensation for such sale, shares in the Great Ship Company (Limited), for distribution amongst the shareholders in the said Eastern Steam Navigation Company (Limited), and to enter into any arrangement whereby the shareholders in the Eastern Steam Navigation Company (Limited), may in lieu of cash, or shares, or in addition thereto, participate in the profits of, or receive any other benefit from, the said Great Ship Company (Limited).

HENRY T. HOPE, Chairman.

An estimate of the first year's work of the *Great Eastern* has been prepared, and the result is such as to leave, after paying a dividend of 15 per cent., a large margin for contingencies; this calculation, which may be obtained at the offices of the company, is founded on statistics of existing traffic, and only takes credit for a minimum amount of cargo and passengers, without taking into account the traffic she would of herself create, or the Government postal subsidies which her speed must command.

On application for ten shares and upwards, a deposit of 2s. 6d. per share will be required, and a further sum of 5s. on allotment; the remainder of the capital to be paid in three calls, at intervals of not less than two months.

On application for less than ten shares, the full amount of 15 per share must be paid.

Forms of applications for shares may be obtained from the brokers, or at the offices of the company, as under.

Temporary offices, 79, Lombard-street, E.C., November, 1858.

OVERLAND ROUTE.—WEEKLY COMMUNICATION BY STEAM TO INDIA, &c., VIA EGYPT.
THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS AND RECEIVE GOODS AND PARCELS FOR THE MEDITERRANEAN, EGYPT, ALEXANDRIA, CEYLON, MADRAS, CALCUTTA, THE STRAITS, CHINA, AND MANILLA, by their steamers leaving Southampton on the 4th and 20th of every month; and for the MEDITERRANEAN, EGYPT, ALEXANDRIA, and BOMBAY, by their packets leaving Southampton about the 11th and 27th of the month.

For further particulars, apply at the company's offices, No. 122, Leadenhall-street; and at Oriental-place, Southampton.

STEAM UNDER SIXTY DAYS ECLIPSED.

The following ships, sailing under the Black Ball flag, have beaten the undermentioned steamers of the Eagle line on the passage home from Melbourne:—

MARCO POLO Boat the ROYAL CHARTER eight days.

LIGHTNING Boat the GREAT BRITAIN ten days.

SHOOTING STAR Boat the ROYAL CHARTER ten days.

PASSAGE MONEY £14 AND UPWARDS.

BLACK BALL LINE BRITISH AND AUSTRALIAN EX-ROYAL MAIL PACKETS.

Appointed to Sail from LIVERPOOL on the 5th of each Month

FOR MELBOURNE, Forwarding Passengers by Steam to various Ports in

AUSTRALIA AND TASMANIA.

Register. Burthen. Captain. Date.

OCEAN CHIEF 1092 5000 BROWN 5th December.

LIGHTNING 2090 4500 BYRNE 5th January.

MARCO POLO 1625 3500 CLARKE 5th February.

COMMODORE PERRY 2243 6000 WEB 5th March.

DONALD MCKAY 2094 5000 TONIN 5th April.

The above line is composed of the LARGEST, THE FINEST, and FASTEST MERCHANT SHIPS IN THE WORLD, and have been built by the most celebrated builders of the day, including M'Kay, of Boston. They are commanded by men who have already rendered themselves famous, and their equipments and accommodations are unequalled by any line of ships afloat.

The Black Ball Line has had the distinguished honour of a visit from Her Majesty the Queen, who was most graciously pleased to say that she had no idea there were such magnificent ships in her merchant navy.

Freight and passage, apply to the owners, JAMES BAINES and Co., Liverpool; or to T. M. MACKAY and Co., 2, Moorgate-street, London, E.C.

PASSAGE MONEY £14 AND UPWARDS.

WHITE STAR LINE OF BRITISH AND AUSTRALIAN EX-ROYAL MAIL PACKETS.

SAILING BETWEEN

LIVERPOOL AND MELBOURNE, on the 20th and 27th of every month, and Forwarding Passengers by Steamers at through rates to

ALL PORTS OF AUSTRALIA.

Captain. Register. Burthen. To sail.

BEETHOVEN 1236 4000 Dec. 21.

PRINCE OF THE SEAS. BROWN 1427 4500 Jan. 20.

RED JACKET. M. H. O'HALLORAN. 2469 5000 —

WHITE STAR. T. C. C. KERK. 2369 5000 —

MERMAID 1320 4000 —

The splendid clipper *Beethoven* is the finest and handsomest packet in port, and will sail punctually at noon of the 21st December. She was built by Donald M'Kay, the celebrated builder of the *Lightning*, *Star Hound*, *James Baines*, &c., and designed especially for the Liverpool Australian trade. The *Beethoven* was especially selected to carry Her Majesty's troops to the Cape of Good Hope and India, and landed them all in good health. Her saloons are very handsome, upwards of 8 ft. in height, and furnished with every comfort and necessary for the voyage. The accommodations for all classes of passengers are of the most superior order.

The very magnificent and fast clipper, *Prince of the Seas*, will be the packet of the 20th January.

Passengers must embark, without fail, on the 20th December.

For freight or passage, apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool; or to GRINDLAY and Co., 63, Cornhill, London; or SETMOOR, PEACOCK, and Co., 116, Fenchurch-street, London.

GARPEL HEMATITE COMPANY (LIMITED).
HEMATITE IRON ORE is NOW being WORKED by this company, at their HEMATITE MINE, near Bown, Ayrshire, the QUALITY of which is EXCELLENT, as will be seen from the following analysis, by Professor Penny:—

Andersonian University, Glasgow, April 23, 1857.

Chemical Analysis of a specimen of Garpel hematite iron ore:—

Peroxide of iron 95-28 per cent.

Silica 4-60 "

Phosphates, &c. 0-12 "

100-00

Metallic iron, 86-7 per cent. This ore is of first-rate quality.

Signed, FREDERICK PENNY, Professor of Chemistry.

A FEW SHARES IN THIS COMPANY FOR SALE. Application to be made to EDWARD SINCLAIR, miniture engineer, 8, West Claremont-street, Edinburgh.

THE ASSOCIATION FOR THE PREVENTION OF STEAM BOILER EXPLOSIONS, AND FOR EFFECTING ECONOMY IN THE RAISING AND USE OF STEAM.

President—WILLIAM FAIRBAIRN, Esq., C.E., F.R.S., &c., &c.

TO ENGINEERS.—WANTED, by this Association, an ACTIVE, INTELLIGENT, and WELL-EDUCATED ENGINEER, theoretically and practically acquainted with the properties of steam, and thoroughly conversant with the details of steam-engines and boilers, to act as chief inspector under the managing committee. Salary, £500 per annum, with railway expenses allowed.

Applications to be made to the undersigned, specifying age and qualification, accompanied with testimonials or references, on or before the 11th day of December next.

By order, HENRY WHITWORTH, Sec.

13, Corporation-street, Manchester, November 16, 1858.

IMPORTANT MINING SPECULATION.

THE BRANDY BOTTLE, PROVIDENCE, AND EDGE RAKE MINES.

These long-celebrated rich lead mines, situated in the manor and liberty of Tideswell, in the Peak of Derbyshire, are now proposed to be put into 1200 shares, of £1 6s. per share, 5s. to be paid on the allotment of each share, and by further calls of 5s. per share, or in such future calls as may be agreed upon during the progress of the intended operations.

The £1500 proposed to be realized from 1200 shares, at £1 6s. per share, will cover the purchase of all the very extensive possessions of the above mines, rights, ways, tools, machinery, and also the estimated cost of sinking a plum shaft on the present workings.—Shares may be had on application to Mr. THOMAS EYRE, Castleton, Derbyshire; Mr. FRANCIS COCKER, agent, Eymore, Derbyshire; or at a meeting to be held at the Bold Rodney Inn, Eymore, Derbyshire, on the 26th Inst.

N.B.—Some further particulars of these mines may be seen in a paragraph in another part of this journal.

DEVON NEW COPPER MINING COMPANY (LIMITED), DISTRICT OF ASHBURTON, DEVONSHIRE.

20,000 shares of £2 each.

The company incorporated, and the liability of shareholders limited, under the Joint-Stock Companies' Acts.

BANKERS.

The London and Westminster Bank (Temple-bar branch, No. 217, Strand, London).

The company are now ready to receive applications for a limited number of the shares. The issue of shares to approved parties who may be willing promptly to take an interest in this enterprise, and make the earliest application, will be made at par.

For further information, inspection of the plans, sections, the former and recent reports of the mining engineers or agents, or other documents relating to the mines, application (either personally or by letter) may be made to the secretary, at the offices of the company, No. 16, Barge-yard Chambers, Bucklersbury, London.

N.B.—Some further particulars of these mines may be seen in a paragraph in another part of this journal.

THE CORNWALL GREAT CONSOLIDATED LEAD AND COPPER MINING COMPANY (LIMITED).

In 12,000 shares of £2 each.

OFFICES.—8, NEW BROAD STREET, CITY.

Shares in the above company to the extent of 10,000 have been taken up by the directors and amongst their friends and connections, without advertisement. The remaining 1200 shares are now offered to the public at par. The company was established last year, for the purpose of purchasing and working a group of mines—viz., the Latchley Consols, South Maria, Tamar Maria, and Tamar River sets—the surrounding the western boundary of the Devon Green' Consols Mine, the lodes of which are laid down by competent authorities as passing through this property. During the progress of the working at Latchley, the large influx of water in the 60 ft. level rendered the aid of a powerful steam-engine necessary; one of 150 horse power was purchased, erected, and is in full work. At the above-named 60 ft. level two lodes of fine copper ore are now being opened upon, which have been traced from the shallow levels, and found to increase in value as they descend. In the South West Maria a good lode has been discovered at 40 ft., which will soon be reached at a greater depth.

The company are in possession of most satisfactory reports of surveys, &c., copies of which may be had, with prospectus and forms of application for shares, at the office of the company, or from THOMAS SMITH, Esq., sen., stock broker, 1, Cophall Chambers, Bank, and Stock Exchange.

CHARLES PEARSON, Sec.

PROSPECTUS.

THE COCKLEY BECK COPPER MINING COMPANY (LIMITED).

Completely registered.

Situated in the parish of Seathwaite, in the county of Lancaster, ten miles from the town of Broughton, and about three miles from the Coniston Copper Mines. Capital £10,000, in 10,000 shares of 5s. each. Deposit 1s. per share.

OFFICES.—8, NEW BROAD-STREET, LIVERPOOL.

WILLIAM SLATER, Esq., Park, near Dalton.

JAMES EDDY, Esq., Dalton.

MR. THOMAS WRIGHT KIRKBY, near Dalton.

MR. BENJAMIN NICHOLAS MONZELL, near Dalton.

MR. WILLIAM PHILLIPS, Dalton.

BANKERS.—Lancaster New Banking Company, Ulverston.

East India House.

THE FINANCE HOME AND PUBLIC WORKS COMMITTEE
OF THE COUNCIL OF INDIA HEREBY GIVE NOTICE, that they will be
READY, on or before Tuesday, the 30th inst., to RECEIVE PROPOSALS in writing,
sealed up, from such persons as may be willing to SUPPLY STEEL, also COPPER
SHEETS, BOLTS, &c., and that the conditions of the said contracts (two in number)
may be had on application at the secretarial office, where the proposals are to be left,
any time before Eleven o'clock in the forenoon of the said 30th day of November, 1858,
after which hour no tender will be received.

J. COSMO MELVILLE.

November 16, 1858.

Metropolitan Board of Works.

MAIN DRAINAGE OF THE METROPOLIS.

NORTHERN HIGH LEVEL SEWER.

TO BUILDERS, CONTRACTORS, AND OTHERS.—THE METROPOLITAN
BOARD OF WORKS HEREBY GIVE NOTICE, that they will meet at the Council
Chamber, Guildhall, in the City of London, on Friday, the 17th day of December next,
at Twelve o'clock at noon precisely, and will then be PREPARED TO OPEN TENDERS
by parties who may be willing to CONTRACT for the CONSTRUCTION of MAIN
BRICK SEWERS, 8 miles 4295 ft., or thereabouts, in length, and for the execution of
other works in connection therewith, to extend from the River Lea to Mansfield-road,
Gospel Oak-fields, near Hampstead, and for the maintenance of such works in complete
repair for twelve calendar months.

Plans, sections, and a specification of the works, together with forms of tender, may
be inspected, and other particulars obtained, at the office of the Board, No. 1, Greek-
street, Soho-square, between the hours of 9 A.M. and 4 P.M., until the 16th Dec. next.
The engineer will attend at the office of the Board on the 18th inst., at Twelve o'clock
at noon, to afford further explanations to parties desirous of tendering, and to make ar-
rangements for taking out the quantities.

Tenders, addressed to the Metropolitan Board of Works, must be delivered at the office
of the Board before Four o'clock on the 16th day of December next, and no tender will be
received after that hour.

The Board do not bind themselves to accept the lowest or any tender, and the party
whose tender shall be accepted will be required to provide two approved sureties for the
due performance of the works.

E. H. WOOLRYCH, Clerk of the Board.

No. 1, Greek-street, Soho-square, November 10, 1858.

STEAM ENGINES FOR SALE.—TO BE DISPOSED OF,

A very superior HIGH-PRESSURE HORIZONTAL ENGINE, of 19 horse power,
14 in. cylinder, and length of stroke 2 ft. ONE of 24 horse power, 16 in. cylinder, and
length of stroke 3 ft. TWO of 28 horse power, 17 in. cylinder, and length of stroke 3 ft.

And TWO of 32 horse power, 20 in. cylinder, and length of stroke 3 ft.—For further par-
ticulars, and terms, apply to Messrs. PAGE AND CAMERON, land agents and surveyors,
64, Old Broad-street, London, E.C., and St. Albans'.

STEAM PUMPS, FOR LAND AND MARINE PURPOSES.

A SINGLE or DOUBLE ACTING; sizes from 2½ to 12 in. diameter, and from 4 to
18 in. stroke; by JOHN CAMERON. Used for feeding boilers, raising water (for reser-
voirs, tanks, irrigation, &c.), turning power, or as a steam fire engine.

Works, Egerton-street, Hulme, Manchester.

FOR SALE, VERY CHEAP, a MARINE STEEPLE ENGINE

of 65 horse power, suitable for land purposes, such as winding coal, pumping, or
driving a mill. Price, £150. An ENGINE of 24 horse power and a ROLLING MILL
connected therewith, for rolling merchant iron, with rolls, &c. Price for the whole
£220.—Apply to J. W. JOHNSON, Columbia-buildings, Liverpool.

PARTIES HAVING STEAM-ENGINES, BOILERS,

P MACHINERY, PLANT, &c., FOR SALE, CAN SECURE FULL PUBLICITY,
without expense, by SENDING PARTICULARS to P. M. PARSONS, engineer and
agent for the sale of engines, machinery, &c., for INSERTION in his REGISTER,

which is published monthly, constantly advertised, and extensively circulated in this
and foreign countries and the colonies. Particulars for the December list must arrive
by the 25th inst. No charge for insertion; a commission only on sales effected.

9, Arthur-street West, London Bridge, E.C.

ALLOTT AND THEWELL, HULL FORGE, HULL, are

A prepared to supply RIVET, BAR, NUT, and ANGLE IRON, SHAPINGS,
FORGINGS, USES, &c., made entirely from scrap iron, on reasonable terms, and on the
shortest notice. The superior quality of the Hull Forge iron is well known, and the
best extensively used where quality is of importance.—Hull Forge, Nov. 8, 1858.

IMPROVED APPLICATION OF WATER-POWER.

TURBINES OR HORIZONTAL WATER-WHEELS.—

MAC ADAM, BROTHERS, AND CO., SOHO FOUNDRY,
BELFAST, propose to SUPPLY and ERECT these WHEELS on any height of fall, and for
driving any kind of machinery. They have been engaged in making them for the
last ten years, and have erected them in many parts of Ireland, and latterly at the Laxey
Lead Mines, Isle of Man, and at Eggleston Mills, near Barnard Castle. They give a much
higher percentage of power than the best vertical water-wheels, are cheaply connected
to other machinery, and on low falls are not affected by floods or back-water.

Further particulars will be given on application.

THEODOLITES, LEVELS, CIRCUMFERENTERS,

MATHEMATICAL DRAWING INSTRUMENTS, SCALES, RULES, TAPES,
SQUARES, &c.—JOHN ARCHBUTT, 20, WESTMINSTER BRIDGE ROAD, LAM-
BETH, near Astley's Theatre, respectfully calls attention to his stock of the above arti-
cles, manufactured by superior workmen. The prices will be found considerably lower
than ever charged for articles of similar quality. An illustrated price list forwarded free
on application: 8 in. dumb level, complete, six guineas; 10 in. ditto, eight guineas;
14 in. ditto, ten guineas; with compass, one guinea each extra; best 5 in. theodolite, di-
vided on silver, eighteen guineas.

CORNISH CRUCIBLES.—JOHN JULEFF, CORNISH

A CRUCIBLE MAKER, FORE-STREET, REDRUTH, CORNWALL (late No. 5,
Baker's-row). JEWELLERS, SILVERSMITHS, METALLURGISTS, and ASSAY-
ERS CRUCIBLES OF ALL SIZES. BLACK LEAD POTS, COVERS, MUFFLES,
CUPELS, &c., OF EVERY DESCRIPTION, AND MADE TO ORDER.

THE LLANGOLLEN SLAB AND SLATE COMPANY

(LIMITED) beg to call the attention of Merchants, Architects, Contractors, and
Builders, to their present STOCK OF SUPERIOR SLATE SLABS (they have several
on hand containing 60 and 70 superficial feet). THIN and THICK ROOFING SLATES
(full and ridge), CISTERNS, SINKS, MANGERS, SALTING TROUGHS, FLOWER
BOXES, and ENAMELLED CHIMNEY-PIECES, CHIFFONIES, TABLE TOPS, and
SLABS. Their enamelled articles are much appreciated, and are in great demand in all
the principal towns in this country, Spain, Australia, and China.

Lists of Prices and Books of Design may be had on application to the MANAGER,
4, Wharf, South-Wall-road, Paddington, W.

SLATE SLABS, &c.—THE CAMEL SLATE COMPANY,

Wadebridge, Cornwall, are PREPARED TO EXECUTE extensive ORDERS in
ROOFING, LARGE SLABS (up to 100 feet in a stone), WATER and MANURE
TANKS, BATHS, CHIMNEY PIECES, and every description of slate goods.

Price lists may be had on application.

BRICKS.—MESSRS. OATES AND INGRAM inform brick makers

on an extensive scale that their PATENT SOLID BRICK MACHINE is now
THOROUGHLY and EFFICIENTLY TESTED, and are prepared to OFFER the fol-
lowing counties to the trade, in districts, either by ROYALTY or PURCHASE:—Mid-
dlessex, Surrey, Sussex, Essex, Kent, Norfolk, Suffolk, Cambridge, Oxford, Gloucester,
Bertford, Berks, Bucks, Huntingdon, Devon, Cornwall, Dorset, Wiltts, Hants, and Isle
of Wight.

With this PATENT MACHINE the ordinary surface clay requires no preparation
whatever, whilst that of a rocky nature has merely to be passed through rollers in the
usual way, and THENCE, WITHOUT ANY TEMPERING, INTO THE MACHINE, FROM WHICH
THE BRICKS ARE REMOVED DIRECT TO THE KILN IN A STATE READY FOR BURNING.

THE MACHINE IS NOW MAKING UPWARDS OF THIRTY BRICKS PER MINUTE AT THE WORKS
of Messrs. KIRK AND PARRY, Government contractors, Fort Elson, near Gosport; and also
at the Patent Solid Brick Works of T. WELLS INGRAM, Oldbury, near Birmingham.

Application for orders to see the machine in operation to be made to Messrs. OATES
and INGRAM, Bradford-street, Birmingham. Samples of clay may be sent and passed
through the machine, and the bricks burnt, or a sample brick will be sent to any party
wishing to see one.

MESSRS. McNICOLL AND VERNON'S PATENT STEAM

TRAVELLING CRANE.

This machine will be found invaluable at the GOODS DEPOTS OF RAILWAYS, in
THE ERECTION OF LARGE BUILDINGS, VIADUCTS, BRIDGES, &c., in IRON
FOUNDRIES, STONEMASONS' YARDS, QUARRIES, SAW-MILLS, TIMBER
YARDS, or in any place where the hoisting, piling, and conveying of heavy weights is
necessary. ONE of them will do MORE WORK with two men than TWO ORDINARY
TRAVELLING CRANES with five men each. ANY ORDINARY TRAVELLING
CRANE CAN BE ALTERED TO THE PATENT PLAN.

The following are some of the parties who have used the cranes, viz.:—

Executors of the late Messrs. Samuel Ellis & Co., Ironfounders, Manchester . . . 1 crane.
The Hull Dock Company

Messrs. Joseph Whitworth and Co., Tool Makers, Manchester 1 "

Messrs. Joseph Down and Co., Saw-Mill Proprietors, Lambeth 1 "

John Jay, Esq., Contractor, London 1 "

Messrs. Peto, Brassey, and Betts, Contractors, London 6 "

Messrs. John McNicoll and Co., Saw-Mill Proprietors, Liverpool 4 "

Applications for Licenses and for estimates to be made to Mr. JOHN VERNON, Engineer
and Shipbuilder, Brunswick Dock, Liverpool.

Was published on November 1, price 6d. per copy, or 6s. annually.—No. 1 of
THE MINING REVIEW, AND MONTHLY COMMERCIAL
RECORD.

The chief object of this publication will be to furnish shareholders, capitalists, and
the public with reliable information relating to Mining, Railways, and other Commercial Se-
curities, together with statistics and general observations of utility to investors.

No. 1 will contain:—

List of Dividends Paid by Cornish and Devon Mines during the past 12 years.

Weekly Review of Business Transacted in Cornwall during the month.

Daily Record of the Share Transactions in the best Dividend and Progressive Mines.

Leading Articles on Cornish and Devon Mining Enterprise and the Coal-hook System.

Compendium giving a detailed Description of the Bassett, South Frances, Old Tiverton

United, South Hulles and West Penstithual, Basset and Basset United, West Grenville,
Bassett, and North Down Mines.

Monthly Commercial Record.

Prices of Railway Stock.

Sales of Copper and other ores, with a mass of valuable data and useful information.

Published at the offices, 4, Austinfairs, London, and to be had of all news-venders.

UNITED STATES OF AMERICA.—DUPEE, BECK, and
SAYLES, BOSTON, MASSACHUSETTS, BROKERS FOR THE PURCHASE and
SALE OF STATE, CITY, and RAILROAD SECURITIES, MANUFACTURING,
AND BANK SHARES, give particular attention to the MINING COMPANIES OF LAKE
SUPERIOR, and furnish reliable information concerning them.

(DUPEE, BECK, and SAYLES refer to the Editor of the *Mining Journal*.)

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO.
MIDLAND WORKS, BIRMINGHAM.
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS.
IN STOCK—FOR SALE OR HIRE.THE RAILWAY CARRIAGE COMPANY,
OLDBURY, NEAR BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND
IRONWORK.
NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK
FOR SALE OR HIRE.
LONDON OFFICES, 34, GREAT GEORGE STREET, WESTMINSTER.THE BIRMINGHAM WAGON COMPANY (LIMITED) HAS
RAILWAY WAGONS FOR HIRE.
Apply to the SECRETARY, 3, Newhall-street, Birmingham.YORKSHIRE TYRE AND AXLE WORKS, ROTHERHAM.
LOCOMOTIVE TYRE BARS OF EVERY DESCRIPTION, FOR ENGINES,
CARRIAGES, AND RAILWAY WAGON WHEELS.
STEEL IRON for springs, MERCHANT and OTHER IRONS MANUFACTURED.
WILLIAM F. HOYLE, Proprietor.THE PERMANENT WAY COMPANY GRANT LICENSES
for the USE of IMPORTANT PATENTED INVENTIONS (now adopted by nu-
merous railways at home and abroad, to the extent of upwards of 10,000 miles), by the
following patentees:—

Adams, W. B.	Boucherie, Dr. H.	May, Charles.
Ashcroft, P.	Bridgewater, H.	Moate, C. R.
Barlow, P. W.	Bruff, P. S.	Pole, William.
Barlow, W. H.	Doull, A.	Prince, Paul.
Birmingham, W.	Macdonell, J. J.	Richardson, R.
Bergue, C. de	Macneill, Sir John.	Samuel, James.
Billups, J. E.	Mansell, R. C.	Wild, C. H.
	Woodhouse, W. H.	Woodhouse, W. H.

Every information as to description, cost, &c., of the various plans may be obtained on
application to the secretary.

WILLIAM HOWDEN.

26, Great George-street, Westminster.

JOHN ROGERSON AND CO., NEWCASTLE-ON-TYNE, AND
MIDDLESBRO'-ON-TYNE.PIG, BAR, PLATE IRON, CHAINS, ANCHORS, FORGINGS, GIRDERS,
PIPES, FOUNDRY WORK.

LONGRIDGE'S WEST HARTLEY STEAM COALS (on the Admiralty List).

COKING, GAS, HOUSE, AND SMITH'S COALS, COKE, FIRE-BRICKS, &c.

JOHN H. PECK, MANUFACTURER OF RAILWAY OIL
COVERS, CART AND WAGON COVERS, OIL CLOTH, STACK COVERS,
BOAT SHEETS, TARPAULIN, BRATTICE CLOTH,
COKE AND CORN SACKS, POTATO BAGS, TWINE, &c., WIGAN.
LONDON AGENT.—T. E. WELLER, 15, Duke-street, Adelphi.

MORRIES STIRLING'S PATENT CAST AND MALLEABLE
IRON.—THE TOUGHENED CAST-IRON, for GIRDERS, SHAFTINGS,
ROLLS, PINIONS, RAILWAY WAGON WHEELS, ENGINE CYLINDERS, HY-
DRAULIC CYLINDERS, and for all purposes where strong, dense iron is required,
CAN BE PURCHASED of the following brands:—

DUNDYAN, HOSLEY COMPANY,
FORT COMPANY.

RAILS OF (OR SURFACED WITH) PATENT HARDENED IRON, CAN BE
PURCHASED direct from the following WORKS:—

PARKGATE, LLOYD'S, FOSTER, AND CO., CWM CELYN AND BLAINE,
HAWES, CHAWSHAY, AND CO., MONKLAND.

For durability, these rails have never been surpassed. They wear out several sets
of ordinary rails, and do not laminate.

Full information, and terms for use of patent right, can be obtained of MESSRS. CONNELL
and HOPE, 3, Princes-street, Westminster; and of MR. THORNTON, Bradford-street, Bir-
mingham. Mr. THORNTON also receives orders for MR. MORRIES STIRLING'S Patent Iron
and Rails.

CALVERT'S PATENT PROCESS FOR MAKING COKE AND
IRON FREE FROM SULPHUR.

FOR LICENSES to USE the above process, apply to ROBERT LONGDON, Jun., 63, King-
street, Manchester.

FOR APPLICATION OF THE PATENT to GAS WORKS, apply to MR. GEORGE TRICKETT,
Exchange Chambers, Manchester.

MESSRS. R. & J. COUPE, ENGINEERS and IRONFOUNDERS,
MANUFACTURERS OF HORIZONTAL HIGH-PRESSURE STEAM-EN-
GINES, from 10 to 200-horse power; the larger description of engines mounted with their
IMPROVED EQUILIBRIUM SLIDE PISTON VALVE, which has proved itself so eminently adapted
for winding and other engines.

JOHN CONDIE, Clayton Foundry, Wigan.

CONDIE'S PATENT STEAM HAMMERS.—

FIRST-CLASS STEAM HAMMERS, from 10 cwt. to 7 tons, suitable for jobbing
forges, puddling forges, and the smith's shop of engineers, ship-builders, wagon-builders,
agricultural implement makers, railway and steam navigation companies, &c.—GOVAN
BIRMINGHAM, Glasgow.

INCROSTATIONS IN STEAM BOILERS ARE EFFECTUALLY
REMOVED and PREVENTED by USING EDWD. MUFF'S COMPOSITION.—

Testimonials, with directions for use, may be had at Tyersall Hall, near Bradford, by
post or otherwise, where orders and communications will receive prompt attention.

TO PREVENT ACCIDENTS by WINDING OVER THE HEAD
GEAR, USE THE PATENT SELF-ACTING STEAM BREAK, which at every
lift from the mine shafts off the steam from the winding engine and applies the break;
also records the number of lifts made.—For illustrated circular and price, apply to
HEATH OGDEN, engineer, St. Mary's, Manchester.

VENTILATION OF COAL MINES.</div

THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Nom. Pr.	Bus. done.	Dividends per Share.	Last Paid.
5120 Alfred Consols (cop.), Phillip* [S.E.]	2 11 10. 8 .. 7 7 1/2 ..	19 5 6. 0 2 6-Oct.	1853			
10000 Bampfylde (copper), Devon ..	0 12 6. 4 ..	0 0 7 1/2. 0 0 7 1/2-May.	1853			
4000 Beard United (copper), Tavistock ..	2 6 8. 5 1/2 ..	10 5 6. 0 2 6-Oct.	1853			
240 Boscuan (tin), St. Just ..	20 10 0. 65 ..	22 0 6. 0 1 0 0-Sep.	1853			
230 Botallack (tin), copper, St. Just* ..	91 5 5 .. 205 ..	425 5 0. 2 10 0-Oct.	1853			
4076 Calstock Consols (copper) ..	5 0 .. 4 1/2 ..	0 2 6. 0 2 6-Dec.	1853			
1000 Cara Brea (copper, tin), Illogan ..	15 0 0. 67 1/2 .. 60 62 1/2 ..	243 10 0. 2 0 0-Aug.	1853			
200 Cefn Cwm Brynwy (lead), Cardigansh. ..	33 0 0. ..	5 0 0. 2 0 0-Mar.	1853			
2000 Collacombe (copper), Lamerton ..	5 0 0. 12 1/2 ..	2 5 0 0. 0 8 0-Dec.	1853			
12000 Copper Miners of England ..	25 0 0. 28 ..	7 1/2 per cent. — Half-yrly.				
20000 Dito ditto (stock) ..	100 0 0. 26 ..	1 per cent. — Half-yrly.				
1055 Craddock Moor (copper), St. Cleer ..	8 0 0. 26 ..	28 .. 1 19 0 0. 0 5 0-Sep.	1853			
128 Cwmythwyl (lead), Cardigansh. ..	60 0 0. 250 .. 250 300 ..	145 0 0. 5 0 0-Sep.	1853			
4076 Devon and Cornwall (copper) ..	4 6 3. 9 ..	0 7 6. 0 2 4-April.	1853			
1024 Devon Gr. Con., Tavist.* [S.E.]	1 0 0. 460 ..	632 0 0. 7 0 0-Sep.	1853			
358 Dolcoath (copper, tin), Camborne* ..	123 17 6. 225 .. 200 225 ..	487 10 0. 4 0-Oct.	1853			
300 East Daren (lead), Cardigansh. ..	33 0 0. 110 .. 105 ..	51 0 0. 3 0 0-Oct.	1853			
2048 East Falmouth (copper), Gwenmap ..	2 0 0. 2 1/2 ..	0 7 6. 0 2 6-Jan.	1853			
128 East Pool (tin, copper), Pool, Illogan* ..	24 5 0. 175 ..	305 0 0. 2 10 0-Aug.	1853			
5709 Exmouth (silver-lead), Christow ..	4 14 0. 8 ..	3 15 0 0. 0 2 6-April.	1853			
1400 Eyan Minin Co. (lead), Derbyshire ..	5 0 0. 38 ..	18 13 4. 1 0 0-Aug.	1853			
243 Grambler and St. Abyun (copper) ..	10 10 0. 137 1/2 ..	17 0 0. 3 0 0-Nov.	1853			
6000 Great South Tolpu [S.E.] Redruth ..	0 11 6. 11 1/2 .. 13 1/2 14 ..	2 17 6. 0 5 0-Oct.	1853			
1024 Herodsfoot (lead), near Liskeard ..	8 10 0. 6 1/2 .. 6 1/2 6 1/2 ..	4 7 6. 0 12 6-June.	1853			
2560 Isle of Man, Limited (lead) ..	25 0 0. 42 ..	58 8 3. 1 0 0-June.	1853			
160 Levant (copper, tin), St. Just ..	10 10 0. 102 1/2 ..	1076 0 0. 5 0 0-Nov.	1853			
400 Lisburne (lead), Cardigansh., Wales* ..	18 15 0. 100 ..	315 10 0. 2 0 0-Aug.	1853			
5000 Mendip Hills (lead), Somerset ..	3 15 0. 12 1/2 ..	1 13 6. 0 6 0-May.	1853			
1800 Miner's Mining Co., Ltd., Wrexham 25 ..	0 11 0. 110 1/2 ..	35 12 6. 0 2 10 0-Nov.	1853			
20000 Mining Co. of Ireland (cop., lead, coal) ..	7 0 0. 13 1/2 .. 13 1/2 ..	19 13 4. 0 5 7-July.	1853			
4750 Newtonards Mining Co., Co. Down ..	50 0 0. 35 ..	55 0 0. 1 0 0-July.	1853			
6000 N. Wh. Bassett (cop., tin), Illogan* [S.E.] mi. ..	7 1/2 .. 7 7 1/2 ..	14 12 0. 0 5 0-Aug.	1853			
6499 Par Consols (cop.), St. Blazey [S.E.] ..	1 2 6. 17 1/2 1/2 16 1/2 17 1/2 ..	32 15 0 0. 10 0-Oct.	1853			
200 Phoenix (copper, tin), Linkinhorne ..	160 0. 420 .. 415 425 ..	294 10 0. 25 0 0-Nov.	1853			
1000 Polberro (tin), St. Agnes (Preferential) ..	15 0 0. 5 ..	500 11 0. 3 6 3 1/2 ..	1853			
1772 ditto ditto (Old and ditto) ..	5 ..	18 11 9. 1 3 3-July.	1853			
5599 Province Mines (tin), Uley Leatant ..	20 13 2. 63 ..	76 4 6. 2 0 0-Aug.	1853			
2500 Rhosyddol and Bachdealdon (lead) ..	11 5 0. 12 ..	0 16 0 0. 3 0 0-July.	1853			
150 10 Ruardean Colliery Company, Limited ..	0 5 0. 3/4 ..	0 1 10 1/2 0 1 0-Aug.	1853			
4750 Newtowlands Mining Co., Co. Down ..	50 0 0. 35 ..	57 0 0. 1 0 0-July.	1853			
526 South Cadron (cop.), St. Cleer* [S.E.] ..	2 10 0. 400 .. 400 410 ..	538 0 0. 8 0 0-Sep.	1853			
526 South Garth ..	20 0 0. 55 ..	2 0 0. 2 0 0-Nov.	1853			
512 South Tolpu (cop.), Redruth, Cornwall ..	8 0 0. 80 .. 77 1/2 82 1/2 ..	77 10 0 0. 1 10 0-Oct.	1853			
436 South Wheal Frances Illogan* [S.E.] ..	18 18 9. 250 .. 250 240 ..	310 5 0. 5 0 0-Nov.	1853			
20000 St. Day United (tin and copper) ..	2 0 0. 56 .. 12 1/2 ..	0 3 6. 0 1 0-Feb.	1853			
475 0 St. Ives Consols (tin), St. Ives ..	16 0 0. 33 .. 30 32 1/2 ..	917 13 0 0. 1 10 0-Nov.	1853			
6000 Tincroft (cop.), Pool, Illogan [S.E.] ..	9 0 0. 33 .. 34 1/2 35 1/2 ..	8 18 6. 0 5 0-Sep.	1853			
20000 Vale of Towy (lead), Carmarth. [S.E.] ..	0 12 6. 13 1/2 6 1/2 7 1/2 ..	4 0 5 0. 1 0 0-July.	1853			
512 Wendron Consols (tin), Wendron ..	23 7 8. 42 1/2 ..	3 0 0. 1 0 0-Sep.	1853			
6000 West Basset (copper), Illogan* [S.E.] ..	1 10 0. 24 ..	14 14 0 0. 6 0 0-Sep.	1853			
256 West Cadron (cop.), Liskeard [S.E.] ..	20 0 0. 129 .. 115 120 ..	287 5 0 0. 2 0 0-May.	1853			
4400 West Fowey Consols (tin and copper) ..	7 0 0. 61 1/2 ..	0 2 6. 0 2 6-Mar.	1853			
4000 West Wheal Seton (cop.), Camborne* ..	30 10 0. 310 .. 290 300 ..	120 0 0. 7 0 0-Oct.	1853			
240 Wheal Bal (tin), St. Just ..	15 0 0. 18 ..	3 0 0. 0 10 0-Nov.	1853			
512 Wheal Bassett (copper), Illogan* [S.E.] ..	5 9 6. 215 ..	205 215 .. 561 10 0 0. 6 0 0-Oct.	1853			
246 Wheal Buller (cop.), Redruth* [S.E.] ..	4 0 10 0. 190 ..	175 180 .. 895 0 0. 5 0 0-Nov.	1853			
696 Wheal Edward (cop.), Calstock [S.E.] ..	5 10 0. 3 1/2 3 1/2 3 1/2 ..	0 5 0. 0 5 0-Mar.	1853			
123 Wheal Friendship (copper), Devon ..	50 0 0. 99 ..	2385 10 0 0. 10 0-Feb.	1853			
484 Wheal Margaret (tin), Uley Lelant ..	19 15 0. 63 .. 63 1/2 65 ..	90 0 0. 2 10 0-Aug.	1853			
1024 Wh. Mary Ann (id.), Menheniot [S.E.] ..	8 0 0. 46 .. 46 46 1/2 ..	38 12 6. 2 5 0 0-Sep.	1853			
80 Wheal Owles (tin, Just), Cornwall ..	70 0 0. 500 ..	225 13 0 0. 5 0 0-Aug.	1853			
1610 Wh. Trelewry (mild-ld.), Liskeard [S.E.] ..	4 10 0. 26 ..	34 10 0 0. 1 0 0-Oct.	1853			
4096 Wheal Wrey (lead), Illogan ..	1 14 0. 2 ..	2 12 6. 0 2 6-Dec.	1853			
5000 Wicklow (copper), Wicklow ..	5 0 0. 39 ..	39 30 5 6. 1 10 0-July.	1853			

MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Nom. Pr.	Bus. done.	Dividends per Share.	Last Paid.
1224 Balleswidden (tin), St. Just ..	11 5 0. 5 ..	12 5 0. 0 5 0-Jan.	1854			
1200 Brightside & Froggatt Grove, Derbysh. ..	3 0 0. 31 1/2 ..	3 0 0. 3 0 0-April.	1854			
1000 Bryntail, Llanliloed, Montgomerysh. ..	7 15 0. 61 ..	13 0 0. 5 0 0-July.	1854			
399 Brynlin Consols (tin), Perranp. ..	2 2 6. 57 ..	0 10 0 0. 10 0-Mar.	1854			
6000 Bwlch (silver-lead), Cardigansh. ..	3 6 6. 11 1/2 ..	0 2 6. 0 2 6-Aug.	1854			
2645 Carnyorth (tin), St. Just ..	4 15 0. 4 ..	0 15 0 0. 3 0 0-June.	1854			
256 Durrowdun (cop.), Camborne [S.E.] ..	20 0 0. 50 .. 45 55 ..	85 0 0. 2 0 0-June.	1854			
30000 Craven Moor, Limited (lead), Yorkshire ..	10 0 0. 34 ..	0 0 9. 0 0 0-Feb.	1854			
2200 Devron Mines (sl.-lead), Durham ..	300 0. 150 ..	122 0 0. 10 0-June.	1854			
672 Ding Dong (tin), Gylval ..	35 5 0. 11 ..	16 7 6. 1 10 0-Mar.	1854			
12800 Drake Walls (tin, copper), Calstock ..	2 10 0. 20 ..	13 0 0. 6 0 2-Sep.	1854			
1024 East Wheal Margaret (tin, copper) ..	7 17 6. 2 ..	0 5 0 0. 5 0 0-Jan.	1854			
410 Fowey Consols (copper), Trewadreath ..	4 0 0. 31 ..	41 3 0. 6 0 2-Feb.	1854			
4448 General Mining Co. for Irel. (cop.), St. Austell ..	4 0 0. 12 ..	1 0 8 0. 3 0 3-June.	1854			
123 Wheal Friendship (copper), Devon ..	50 0 0. 99 ..	2385 10 0 0. 10 0-Feb.	1854			
1024 Wheal Margaret (tin), St. Austell ..	14 5 0. 9 ..	0 7 6. 0 7 6-Dec.	1854			
2666 Wh. Wh. Vor (tin, cop.), Helston [S.E.] ..	8 7 6. 1 ..	0 5 0 0. 5 0 0-Oct.	1854			
12000 Hindston Down Cons. (cop.), Calstock ..	3 13 6. 3 ..	2 16 0 0. 2 0 2-Nov.	1854			
2000 Holiford (copper), near Tipperary ..	11 9 0. 83 ..	4 2 0 0. 5 0 0-Jan.	1854			
20000 Laxey Mining Company, Isle of Man ..	100 0. 1000 ..	1420 0 0. 50 0-Jun.	1854			
5000 Lewis Mines (tin, copper), St. Erth ..	6 9 11. 21 ..	0 10 0 0. 10 0-Dec.	1854			
20000 Marks Wheal (tin, copper), Camborne ..	4 10 0. 21 ..	0 10 0 0. 3 0 0-Sep.	1854			
5000 Merlin (lead), Flint ..	14 10 0. 21 ..	0 10 0 0. 3 0 0-Oct.	1854			
20000 Gozimian (silver-lead), Camborne ..	12 6 0. 21 ..	0 10 0 0. 5 0 0-Sep.	1854			
1024 Great Western Cons. (tin), St. Austell ..	19 0 0. 110 ..	21 10 0 0. 7 0 0-Jan.	1854			
12000 Great Cadron and Slade [L.] ..	1 0 0. 1 ..	12 0 0. 10 0-Jun.	1854			
4095 Great Cadron (cop.), St. Ives ..	0 4 0. 46 ..	7 0 0. 3 0 0-Nov.	1854			
6000 Great Crimis (cop						